

STATISTICAL ANALYSIS OF METEOROLOGICAL PARAMETERS DURING FOG AT 45 U.S. AIRPORTS

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FINAL REPORT

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<p>16. Abstract</p> <p>Pertinent climatological data are analyzed for fog conditions (prevailing visibility 1/2 mile and less without precipitation) at 45 U. S. airports for the ten year period 1956-1965. These data are considered essential for use in the design of systems to disperse and/or prevent fog at airports.</p> <p>Tables and statistical values are included for: wind speed vs frequency, wind direction vs frequency, wind direction vs wind speed, visibility vs frequency, temperature vs frequency and cumulative totals for all airports. An additional analysis is included for fog at temperatures less than 33 deg. F. to include wind direction vs frequency, wind direction vs wind speed, wind rose data and temperature vs frequency. Monthly fog frequencies are stated for both cold and warm fog.</p>					
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STATISTICAL ANALYSIS OF METEOROLOGICAL PARAMETERS DURING FOG AT 45 U. S. AIRPORTS

The systems engineering approach to the development of fog dispersal systems at airports requires quantitative data on the fog environment. These data are considered essential for use in the design of systems to disperse and/or prevent fog at airports.

A computer program was developed to extract pertinent climatological data obtained during fog conditions (prevailing visibility 1/2 mile and less without precipitation) at 45 U. S. airports for the ten year period, 1956 - 1965 inclusive. Data were extracted from duplicates of records received from the National Climatic Center, Asheville, North Carolina.

Included in the fog classification are: fog, ice fog and ground fog with or without haze and/or smoke but without precipitation. The analyzed data includes both hourly and special observations. Each station has a summation of the hourly observations, total observations and the observations with smoke and/or haze. The average number of fog hours per year with visibility 1/2 mile or less can be obtained by dividing the number of hourly observations by ten (the number of years). The fog summation gives the number of observations of fog with liquid and frozen precipitation, although these observations were not included in the analysis.

Wind data is of most importance, particularly for locating ground-based fog dispersal systems, in relation to the runway and approach zones. Since the late 1950's, the F-420 (Series A through C) wind measuring instruments have been used almost exclusively in developing the data base for winds. The threshold speed for this instrument is 1.75 to 2.0 knots depending upon the mechanical condition of the instrument. The speed accuracy is ± 0.5 knots in the one to ten knot speed range. The consequence of the comparatively high threshold speed is to skew the data toward a greater percentage of calm conditions than actually exist during fogs. The wind direction accuracy is ± 5.0 degrees. The comments on speed and direction accuracy may be academic if the instrument has been moved or the measurement elevation changes appreciably during the ten years of data collection. Normally the wind data are collected approximately 20 feet above the field elevation. It is generally agreed that this is not the most desirable level at which to measure wind speeds if one is trying to determine the speed of movement of the fog. For a detailed discussion on the F-420 we recommend "Notes on Wind Measurement," by H. H. Crouser, August 1967, Technical Memorandum WBTM EDL-2. Temperature data are accurate to $\pm 0.5^\circ \text{F}$.

Fog parameters are analyzed individually and correlated selectively to each other for each of the 45 airports. A cumulative total for 39 airports is included. The statistical mean, mode, median, standard deviation and skew are computed.

The following airports are included in this study:

1. Milwaukee, Wi.	31. Detroit, Mi.	DTW
2. Minneapolis, Mn.	32. St. Louis, Mo.	STL
3. Denver, Co.	33. New York (La Guardia), N. Y.	LGA
4. Burbank, Ca.	34. Buffalo, N. Y.	BUF
5. Los Angeles, Ca.	35. Newark, N. J.	EWB
6. Oakland, Ca.	36. Boston, Ma.	BOS
7. San Francisco, Ca.	37. Hartford (Windsor Locks), Ct.	BDL
8. Salt Lake City, Ut.	38. Rochester, N. Y.	ROC
9. Portland, Or.	39. Syracuse, N. Y.	SYR
10. Seattle, Wa.	40. Cleveland, Oh.	CLE
11. Kansas City, Mo.	41. Columbus, Oh.	CMH
12. Miami, Fl.	42. Spokane, Wa.	GEG
13. New Orleans, La.	*43. Boise, Id.	BOI
14. Houston, Tx.	*44. Reno, Nv.	RNO
15. Philadelphia, Pa.	*45. Medford, Or.	MFR
16. Washington (National), D.C.		
17. Atlanta, Ga.		
18. Birmingham, Al.		
19. Nashville, Tn.		
20. Dallas, Tx.		
21. Anchorage, Ak.		
22. Baltimore, Md.		
23. Washington (Dulles), D. C.		
24. Cincinnati, Oh.		
25. Dayton, Oh.		
26. Indianapolis, In.		
27. Louisville, Ky.		
28. New York, N. Y.		
29. Pittsburgh, Pa.		
30. Chicago, Il.		

* These airports have only cold fog analysis from hourly observations.

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Cumulative Totals - Page 262

WIND SPEED VS. FREQUENCY

FREQUENCY	118	16	167	168	181	216	172	160	132	85	50	49	39	18	80

CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

MEAN	5.85 KNOTS
MODE	5.00 KNOTS
MEDIAN	5.00 KNOTS
STD. DEV.	3.55 KNOTS
SKEW	0.24

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	118	134	405	866	1198	1415	1554	1611	1691

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	110	101	296	140	70	90	100	166	113	108	80	97	47	59	36	31
CALM	N	NNE	NE	ENE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW
	TRUE WIND DIRECTION															

WIND DIRECTION VS. WIND SPEED

[illegible]

NOTE

VISIBILITY VS. FREQUENCY
NOTE: 7/10 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	13	186	457	13	567	2	67	0	321
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	2

MEAN	3.73/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.44/16
SKEW	-0.09

TEMPERATURE VS. FREQUENCY

[illegible]

MEAN	45.99	° F.
MODE	47.50	° F.
MEDIAN	47.50	° F.
STD. DEV.	11.84	° F.
SKEW	-0.04	

HOURLY OBSERVATIONS	826	SPECIAL OBS.	865	TOTAL OBSERVATIONS	3849	FOG WITH SMOKE AND/OR HAZE	503
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1

MIKE

MKE

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	25	11	29	17	8	8	4	1	14	20	29	19	11	8	4	1	2
CALM	N	NNE	NE	ENE	L	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW		
	TRUE WIND DIRECTION																

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	1	1	1	1	0	1	0	1	0	0	0	0	0	0
NNE	0	1	0	2	3	5	2	2	3	6	3	0	0	2	0	0	2
NE	0	0	0	0	3	6	5	0	0	0	2	1	0	0	0	0	0
ENE	0	0	2	0	1	4	1	0	0	0	0	0	0	0	0	0	0
E	0	0	1	2	2	3	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	1	1	0	0	1	1	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	4	2	6	2	0	0	0	0	0	0	0	0	0	0	0
S	0	0	1	6	5	2	2	0	0	1	0	1	1	1	1	1	1
SSW	0	0	6	1	2	2	1	0	3	5	6	2	1	1	0	0	0
SW	0	0	1	2	0	2	0	4	2	3	3	1	1	0	0	0	0
WSW	0	0	0	1	2	0	2	3	0	0	2	0	0	0	0	0	0
W	0	0	0	2	0	2	0	2	2	0	0	0	0	0	0	0	0
WNW	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
CALM	25	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
		CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12		
		WIND SPEED															

MKE

WIND KUST DATA

NKS

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.5	0.9	0.5	0.5	0.5	2.4	5.2
NNE	0.5	0.9	3.8	1.9	4.3	1.4	0.9	13.7
NE	0.0	0.0	4.3	2.4	0.0	1.4	0.0	6.1
ENE	0.0	0.9	2.4	0.5	0.0	0.0	0.0	3.8
E	0.0	1.4	2.4	0.0	0.0	0.0	0.0	3.8
ESE	0.0	0.9	0.0	0.9	0.0	0.0	0.0	1.9
SE	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
SSE	0.0	2.8	3.8	0.0	0.0	0.0	0.0	6.6
S	0.0	3.3	3.3	0.9	0.5	0.5	0.9	9.5
SSW	0.0	3.3	1.9	0.5	3.8	3.8	0.5	13.7
SW	0.0	1.4	0.9	1.9	2.4	1.9	0.5	9.0
WSW	0.0	0.5	0.9	2.4	0.0	0.9	0.5	5.2
W	0.0	0.9	0.9	0.9	0.9	0.0	0.0	3.8
WNW	0.0	0.5	1.4	0.0	0.0	0.0	0.0	1.9
NW	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5
NNW	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.9
CALM								11.8
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	72	99	40
TEMPERATURE (F)	<28	28 TO 31	32

CHECK COUNT 211
 FOG WITH LP 33
 FOG WITH FP 33
 ALL FOG CASES 275#
 PURE FOG 120
 REC.OBS. 100

FOG WITH SMOKE AND/OR HAZE 46

MKE

MKE

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	11	4	0	0	0	0	0	15
1957	0	0	0	0	0	2	0	0	0	0	0	0	2
1958	0	0	0	0	0	0	5	0	0	0	0	0	5
1959	0	0	0	0	0	1	0	1	16	0	0	0	18
1960	0	0	0	0	0	0	2	0	0	0	0	0	2
1961	0	0	0	0	0	4	0	9	0	0	0	0	13
1962	0	0	0	0	0	0	0	7	12	0	0	0	19
1963	0	0	0	0	0	3	0	0	0	0	0	0	3
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	4	0	0	0	0	0	0	4

TOTAL HRS	0	0	0	0	0	25	11	17	28	0	0	0	81
AVG HRS	0.0	0.0	0.0	0.0	0.0	2.50	1.10	1.70	2.80	0.0	0.0	0.0	3.10

MKE

MKE

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2-MILE OR LESS.

WARM FOG

MONTHLY-FOG FREQUENCY

JULY AUG SEPT OCT NOV DEC JAN FEB MAR APR MAY JUNE TOTAL

1956 11 8 4 24 23 5 0 7 0 4 16 22 124

1957 6 8 0 0 2 0 1 4 0 34 15 10 80

1958 2 7 0 14 16 0 0 1 2 8 1 7 58

1959 0 20 0 0 0 22 5 1 7 6 18 0 79

1960 0 3 3 8 8 0 0 2 12 11 27 0 74

1961 8 5 2 4 2 9 0 4 2 3 1 14 54

1962 1 1 0 8 7 0 0 0 7 21 0 8 53

1963 0 0 0 13 9 0 0 0 2 12 15 3 54

1964 3 0 8 7 12 20 1 0 3 18 0 0 72

1965 3 7 15 2 10 15 12 10 5 6 11 1 97

TOTAL HRS 34 59 32 80 89 71 19 29 40 123 104 65 745
AVG HRS 3.40 5.90 3.20 8.00 8.90 7.10 1.90 2.90 4.00 12.30 10.40 6.50 74.50

MKE

WIND SPEED VS. FREQUENCY

FREQUENCY	143	0	41	93	105	107	75	52	45	35	27	6	6	2	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
		WIND SPEED (KNOTS)													

MEAN	4.39 KNOTS
MODE	0.0 KNOTS
MEDIAN	4.00 KNOTS
STD. DEV.	3.02 KNOTS
SKEW	1.46

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	143	143	277	489	616	696	729	737	737
	<hr/>								
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	143	21	7	9	22	35	67	116	53	75	50	64	24	18	12	12	9
CALM		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNW
						TRUE WIND DIRECTION											

WIND DIRECTION VS. WIND SPEED

[illegible]

MSP

NSP

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	13	75	141	42	212	1	80	0	173
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
		-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	
	VISIBILITY(MILES)								

STATISTICAL RESULTS

MEAN 4.34/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.47/16
SKEW 0.14

TEMPERATURE VS. FREQUENCY

FREQ.	40	24	25	19	13	17	19	32	61	49	57	16	18	24	10	42	27	12	34	25	31	8	25	18	49	13	3	12	12	2	0
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72	
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72		
	TEMPERATURE (F)																														

STATISTICAL RESULTS

MEAN 36.88°F.
MODE 29.50°F.
MEDIAN 35.50°F.
STD. DEV. 13.50°F.
SKEW 0.60

HOURLY OBSERVATIONS 312 SPECIAL OBS. 425 TOTAL OBSERVATIONS 1376 FUG WITH SMOKE AND/OR HAZE 28

MSP

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE: LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	34	12	4	4	9	16	21	40	28	34	30	11	9	3	7	7
	CALM	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNW

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNW	CALM
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WIND SPEED	1	2	3	4	5	6	7	8	9	10	11	12	12	12	12	12

MSP

MSP

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS									
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL		
N	0.0	0.3	2.0	1.3	0.3	0.0	0.0	4.0		
NNE	0.0	0.7	0.3	0.0	0.3	0.0	0.0	1.3		
NE	0.0	0.7	0.3	0.3	0.0	0.0	0.0	1.3		
ENE	0.0	0.3	1.7	1.0	0.0	0.0	0.0	3.0		
E	0.0	1.3	2.7	0.0	1.0	0.3	0.0	5.4		
ESE	0.0	0.3	2.3	2.0	1.0	1.3	0.0	7.0		
SE	0.0	2.0	4.7	3.0	2.3	0.3	1.0	13.4		
SSE	0.0	0.7	2.0	2.3	3.7	0.7	0.0	9.4		
S	0.0	1.0	5.0	1.0	4.3	0.0	0.0	11.4		
SSW	0.0	1.7	4.7	2.7	0.7	0.0	0.3	10.0		
SW	0.0	2.3	5.7	0.3	0.7	1.0	0.0	3.7		
WSW	0.0	1.3	1.7	0.7	0.0	0.0	0.0	3.0		
W	0.0	1.7	1.0	0.3	0.0	0.0	0.0	1.0		
WNW	0.0	1.0	0.0	0.0	0.0	0.0	0.0	2.3		
NW	0.0	1.7	0.3	0.3	0.0	0.0	0.0	2.3		
NNW	0.0	0.7	0.3	1.0	0.3	0.0	0.0	2.3		
CALM								11.4		
TOTAL								100.0		

TEMPERATURE VS. FREQUENCY

FREQUENCY	175	100	24
TEMPERATURE (F)	28 TO 31	32	

CHECK COUNT 299
 FOG WITH LP 34
 FOG WITH FP 36
 ALL FOG CASES 362
 PURE FOG 215
 REC-035. 128

FOG WITH SMOKE AND/OR HAZE 12

MSP

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	8	2	1	7	0	0	0	18
1957	0	0	0	0	0	14	0	4	0	0	0	0	18
1958	0	0	0	0	0	0	5	0	0	0	0	0	5
1959	0	0	0	0	0	4	3	3	2	0	0	0	12
1960	0	0	0	0	0	0	6	0	1	0	0	0	7
1961	0	0	0	0	0	2	0	6	0	0	0	0	8
1962	0	0	0	0	0	0	0	4	9	0	0	0	13
1963	0	0	0	0	0	3	4	2	0	0	0	0	9
1964	0	0	0	0	4	7	0	0	0	0	0	0	11
1965	0	0	0	0	3	5	0	6	2	2	0	0	18

TOTAL HRS	0	0	0	0	7	43	20	26	21	2	0	0	119
AVG HRS	0.0	0.0	0.0	0.0	0.70	4.30	2.00	2.60	2.10	0.20	0.0	0.0	11.90

MSP

MSP

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2-MILE OR LESS.

WARM FOG

MONTHLY FOG-FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	2	0	1	2	0	0	0	0	0	0	0	5
1957	5	0	0	0	0	2	0	0	0	0	0	0	7
1958	0	0	0	3	0	0	1	2	0	0	8	3	17
1959	0	0	0	0	0	9	1	0	0	0	0	0	10
1960	5	10	0	4	3	0	0	0	0	3	0	0	25
1961	0	0	0	0	7	4	0	0	0	0	1	3	15
1962	0	7	0	5	6	0	0	0	1	1	0	3	23
1963	2	0	1	16	3	0	0	0	0	3	2	0	27
1964	0	0	2	12	17	0	0	0	0	0	9	0	40
1965	3	0	0	0	7	6	0	0	0	8	0	0	24
TOTAL HRS	15	19	3	41	45	21	2	2	1	15	20	9	193
AVG-HRS	1.50	1.90	0.30	4.10	4.50	2.10	0.20	0.20	0.10	1.50	2.00	0.90	19.30

WIND SPEED VS. FREQUENCY

FREQUENCY	46	0	7	50	99	86	76	43	46	24	29	12	9	3
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
	WIND SPEED (KNOTS)													

MEAN	5.55 KNOTS
MODE	4.00 KNOTS
MEDIAN	5.00 KNOTS
STD. DEV.	2.89 KNOTS
SKEW	0.54

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	40	46	103	288	407	482	523	535	538

CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY		46	94	54	29	20	13	9	15	6	41	46	22	11	8	15	59	50	
CALM			N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
		TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

[illegible]

DEN

DEN

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	22	38	91	13	210	1	47	0	116
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	
VISIBILITY(MILES)									

STATISTICAL RESULTS

MEAN 4.30/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.39/16
SKEW 0.13

TEMPERATURE VS. FREQUENCY

FREQ.	37	4	19	18	50	41	52	35	49	49	24	10	9	8	25	18	10	10	6	2	20	9	18	9	6	0	0	0	0		
	<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72		
										TEMPERATURE (F)																					

STATISTICAL RESULTS

MEAN 31.66 °F.
MODE 25.50 °F.
MEDIAN 29.50 °F.
STD. DEV. 12.36 °F.
SKEW 0.50

HOURLY OBSERVATIONS 194 SPECIAL OBS. 344 TOTAL OBSERVATIONS 1099 FOG WITH SMOKE AND/OR HAZE 10

DEN

DEN

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	33	54	38	20	17	10	7	8	5	37	34	15	6	3	7	34	26
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	5	5	7	6	12	3	10	0	0	0	1		
NNE	0	0	0	1	7	2	5	3	8	0	4	7	0	1	1		
NL	0	0	1	3	1	3	4	1	1	2	2	0	2	0	0		
ENE	0	0	0	4	4	1	2	2	2	2	0	0	0	0	0		
E	0	0	0	2	2	4	1	0	0	0	1	0	0	0	0		
ESE	0	0	0	0	3	2	0	1	0	1	0	0	0	0	0		
SE	0	0	0	0	3	2	3	0	0	0	0	0	0	0	0		
SSE	0	0	0	0	4	1	0	0	0	0	0	0	0	0	0		
S	0	0	0	0	4	7	6	13	2	3	0	0	0	0	0		
SSW	0	0	1	2	9	7	3	6	1	2	2	0	1	0	0		
SW	0	0	2	0	6	3	2	2	0	0	0	0	0	0	0		
WSW	0	0	0	4	1	1	0	0	0	0	0	0	0	0	0		
W	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0		
NNW	0	0	0	1	1	2	0	0	0	0	0	1	0	0	0		
NW	0	0	2	1	1	6	5	3	2	1	2	0	1	0	0		
NNW	0	0	0	2	2	4	6	2	1	3	3	1	1	1	1		
CALM	33																

CALM 1 2 3 4 5 6 7 8 9 10 11 12 >12
WIND SPEED

WIND RUSH DATA

DEN

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS								TOTAL
	1-2KT	3-6KT	7-8KT	9-10KT	11-12KT	>12KT			
N	0.0	1.4	2.8	3.7	4.2	2.8	0.3	15.3	
NNE	0.0	0.3	2.3	2.3	2.3	3.1	0.3	10.7	
NE	0.0	1.1	1.4	1.4	0.8	0.6	0.6	5.6	
ENE	0.0	1.1	1.4	1.1	1.1	0.0	0.0	4.8	
E	0.0	0.8	1.7	0.3	0.0	0.3	0.0	2.8	
ESE	0.0	0.0	1.4	0.3	0.3	0.0	0.0	2.0	
SE	0.0	0.0	1.4	0.8	0.0	0.0	0.0	2.3	
SSE	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4	
S	0.0	1.1	3.7	4.2	1.4	0.0	0.0	10.5	
SSW	0.0	0.8	4.5	2.5	0.8	0.6	0.3	9.6	
SW	0.0	0.6	2.5	1.1	0.0	0.0	0.0	4.2	
WSW	0.0	1.1	0.6	0.0	0.0	0.0	0.0	1.7	
W	0.0	0.3	0.8	0.0	0.0	0.0	0.0	0.8	
WNW	0.0	0.3	0.8	0.6	0.0	0.3	0.0	2.0	
NW	0.0	0.8	4.8	2.3	0.8	0.6	0.3	9.6	
NNW	0.0	0.6	1.7	2.3	1.1	1.1	0.6	7.3	
CALM								9.3	
TOTAL								100.0	

TEMPERATURE VS. FREQUENCY

FREQUENCY	234	96	24	32
TEMPERATURE (F)	<28	28 TO 31	32	

CHECK COUNT 354
 FOG WITH LP 56
 FOG WITH FP 111
 ALL FOG CASES 519
 PURE FOG 347
 REC.OBS. 132

FOG WITH SMOKE AND/OR HAZE 2

DEN

DEN

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
 OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
 AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	1	14	1	0	0	0	0	16
1957	0	0	0	4	0	0	0	4	1	0	0	0	9
1958	0	0	0	2	2	2	0	5	5	0	0	0	16
1959	0	0	0	3	0	0	2	11	0	0	0	0	16
1960	0	0	0	0	0	0	0	5	0	0	0	0	5
1961	0	0	0	0	7	4	0	1	2	0	0	0	14
1962	0	0	0	0	7	5	0	5	0	1	0	0	18
1963	0	0	0	0	2	1	0	5	3	0	0	0	11
1964	0	0	0	0	3	9	4	0	0	0	0	0	16
1965	0	0	0	0	0	0	0	1	3	0	0	0	4

TOTAL HRS	0	0	0	9	21	22	20	38	14	1	0	0	125
AVG HRS	0.0	0.0	0.0	0.90	2.10	2.20	2.00	3.80	1.40	0.10	0.0	0.0	12.50

DEN

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY-1/2-MILE-OR-LESS.

WARM FOG

MONTHLY FOG-FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	2	0	0	2	0	0	0	0	3	0	0	7
1957	0	2	0	3	0	0	0	0	0	6	0	0	11
1958	2	0	0	3	0	0	0	0	1	0	0	2	8
1959	0	1	5	1	0	0	0	0	0	3	2	0	12
1960	0	0	0	0	0	0	0	0	0	1	2	0	3
1961	0	0	1	0	4	0	0	0	0	0	5	2	12
1962	0	0	2	0	0	0	0	0	0	0	0	0	2
1963	0	3	3	0	0	0	0	0	0	0	0	0	6
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	2	4	0	0	0	0	0	2	0	0	0	8
TOTAL HRS	2	10	15	7	6	0	0	0	3	13	9	4	69
AVG HRS	0.20	1.00	1.50	0.70	0.60	0.00	0.00	0.00	0.30	1.30	0.90	0.40	6.90

BUR

WIND SPEED VS. FREQUENCY

FREQUENCY	315	223	167	158	195	147	65	27	10	3	3	0	0	0	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 2.48 KNOTS
 MODE 0.0 KNOTS
 MEDIAN 2.00 KNOTS
 STD. DEV. 2.11 KNOTS
 SKEW 1.18

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	315	538	803	1205	1297	1310	1313	1313	1313
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	75	59	19	18	45	122	157	59	46	64	37	45	26	42	70	89	95
	CALM	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNW	NNW

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WIND 7-9	0	0	0	0	2	9	15	3	1	0	2	1	0	0	0	0	0
SPEED 4-6	0	26	7	4	12	49	72	31	25	23	5	10	7	15	31	37	53
KNOTS 1-3	0	33	12	14	31	64	69	25	20	46	30	34	19	27	34	50	40
CALM	315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TRUE WIND DIRECTION

VISIBILITY VS. FREQUENCY
NOTE: 7/10 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	127	170	231	133	260	44	140	0	208
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	2

MEAN	3.65/16
MODE	4.00/16
MEDIAN	3.00/16
STD. DEV.	2.53/16
SKEW	-0.14

[illegible]

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MEAN  52.22 DEGREES(F)
MODE  51.50 DEGREES(F)
MEDIAN  51.50 DEGREES(F)
STD. DEV.  5.61 DEGREES(F)
SKEW  0.13

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HOURLY OBSERVATIONS	592	SPECIAL OBS.	721	TOTAL OBSERVATIONS	2233	FOG WITH SMOKE AND/OR HAZE	109
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BUR

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	0	0	0	0
TRUE WIND DIRECTION																			

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WIND SPEED																			
CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12						

BUR

WIND KUST DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	25.0	0.0	0.0	0.0	0.0	0.0	25.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	75.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	4	0
28 28 TO 31 32			
TEMPERATURE (F)			

CHECK COUNT 4
 FOG WITH LP 0
 FOG WITH FP 0
 ALL FOG CASES 4
 PURE FOG 4
 REC.OBS. 2

FOG WITH SMOKE AND/OR HAZE 0

BUR

6UR

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	2	0	0	0	0	0	2
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	2	0	0	0	0	0	2
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.20

BUR

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
- AND SURFACE VISIBILITY 1/2-MILE-OR-LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	4	4	14	12	6	4	13	6	7	8	2	8	88
1957	0	0	1	0	13	0	0	16	0	5	0	2	37
1958	6	3	4	10	11	6	3	13	0	1	3	2	62
1959	0	1	2	23	7	0	18	0	6	3	0	1	61
1960	0	5	1	9	11	2	1	5	7	3	0	2	46
1961	0	2	0	11	4	22	0	3	1	1	0	2	46
1962	0	2	16	25	25	44	0	9	3	0	1	1	126
1963	0	0	0	2	4	0	3	23	0	0	0	0	32
1964	0	0	10	8	0	5	20	0	2	0	2	1	48
1965	0	1	0	5	10	0	2	16	0	1	3	0	44
TOTAL HRS	10	18	48	105	97	83	60	91	26	22	11	19	590
AVG HRS	1.00	1.80	4.80	10.50	9.70	8.30	6.00	9.10	2.60	2.20	1.10	1.90	59.00

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	440	576	600	348	699	118	387	0	419
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	16	8	16	4	16	8	16	2	
	VISIBILITY(MILES)								

STATISTICAL RESULTS

MEAN	3.31/16
MODE	4.00/16
MEDIAN	3.00/16
STD. DEV.	2.46/16
SKEW	-0.28

TEMPERATURE VS. FREQUENCY

[illegible]

STATISTICAL RESULTS

MEAN	54.70	°P.
MODE	53.50	°P.
MEDIAN	53.50	°P.
STD. DEV.	4.97	°P.
SKEW	0.24	

HOURLY OBSERVATIONS	1477	SPECIAL OBS.	2110	TOTAL OBSERVATIONS	7293	FGG WITH SMOKE AND/OR HAZE	1479
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WIND DIRECTION VS. FREQUENCY

FREQUENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NNN
TRUE WIND DIRECTION															

[illegible]

CALM		1	-	2	-	3	-	4	5	6	7	8	9	10	11	12 >12
WIND SPEED																

LAX

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS									
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL		
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL								0.0		

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	0	0
C28 28 TO 31 32			
TEMPERATURE (F)			

CHECK COUNT 0
 FOG WITH LP 0
 FOG WITH FP 0
 ALL FOG CASES 0
 PURE FOG 0
 RECORDS 0

FOG WITH SMOKE AND/OR HAZE 0

LAX

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL HRS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

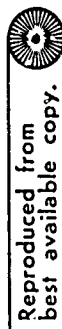
OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

HARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	4	10	9	8	60	18	5	35	14	2	8	173
1957	2	2	18	3	4	15	2	7	11	12	3	14	93
1958	10	0	31	5	39	44	16	33	2	0	2	8	190
1959	1	0	2	15	33	13	54	4	41	3	1	0	167
1960	19	2	19	4	45	15	9	13	27	16	0	0	169
1961	0	1	10	11	19	87	12	20	13	1	2	3	179
1962	0	10	8	26	43	37	26	22	5	70	0	5	252
1963	0	0	4	0	25	27	9	24	0	5	0	0	100
1964	0	0	0	34	1	25	0	0	0	5	2	6	73
1965	10	4	0	43	1	3	7	8	1	16	1	1	81

TOTAL HRS 42 23 108 138 218 326 153 136 135 142 13 45 1477
AVG HRS 4.20 2.30 10.80 13.00 21.80 32.60 15.30 13.60 13.50 14.20 1.30 4.50 147.70



OAK

WIND SPEED VS. FREQUENCY

FREQUENCY	634	3	10	150	292	214	91	54	26	5	2	3	0	0	0
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

STATISTICAL RESULTS

MEAN 2.66 KNOTS
 MODE 0.0 KNOTS
 MEDIAN 3.00 KNOTS
 STD. DEV. 2.53 KNOTS
 SKEW 1.05

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	634	637	797	1303	1448	1479	1484	1484	1484	1484
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL		
	WIND SPEED (KNOTS)									

WIND DIRECTION VS. FREQUENCY

FREQUENCY	634	84	26	29	23	57	40	74	63	101	30	35	40	70	60	74	44
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

	>12	10-12	7-9	4-6	1-3	CALM	634	84	26	29	23	57	40	74	63	101	30	35	40	70	60	74	44	
WIND	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
SPEED	0	7	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
KNOTS	0	43	17	7	18	39	30	45	43	72	24	26	29	51	46	49	34	20	7	0	0	0	0	
CALM	634	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	TRUE WIND DIRECTION																							

OAK

VISIBILITY VS. FREQUENCY

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN	2.82/16
MODE	0.0 /16
MEDIAN	2.00/16
STD. DEV.	2.82/16
SKEN	1.00

TEMPERATURE VS. FREQUENCY

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN	47.16	° F.
MODE	45.50	° F.
MEDIAN	47.50	° F.
STD. DEV.	5.14	° F.
SKEW	0.32	

HOURLY OBSERVATIONS	771	SPECIAL OBS.	713	TOTAL OBSERVATIONS	3399	FOG WITH SMOKE AND/OR HAZE	275
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WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSE	SW	WSW	W	WNW	NNW	NNN	NNN	NNN
TRUE WIND DIRECTION																		

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN -33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

4.

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILL, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SOME ASD/OK HAZE BUT NO PRECIPITATION.

[illegible]

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	3	0
	28	31	32
	TEMPERATURE (F)		

CHECK COUNT	3
FUG WITH LP	0
FUG WITH FP	0
ALL FUG CASES	3
PURE FUG	0
REC.OBS.	2

FUG WITH SMOKE AND/OR HAZE 2

OAK

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	2	0	0	0	0	0	2
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL HRS	0	0	0	0	0	0	2	0	0	0	0	0	2
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.0	0.0	0.20

OAK

OAK

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	6	43	28	5	0	0	0	0	82
1957	0	0	0	5	4	3	11	25	3	0	0	0	51
1958	0	0	0	8	16	23	35	3	0	0	0	0	85
1959	0	0	0	0	0	2	20	0	7	0	0	0	29
1960	0	0	0	17	13	36	8	3	5	0	0	0	82
1961	1	0	0	2	5	33	53	1	0	0	0	0	75
1962	0	0	2	47	16	134	19	19	0	0	0	0	237
1963	0	0	0	1	17	11	19	12	0	0	0	0	60
1964	0	0	0	0	0	0	0	8	5	0	0	0	19
1965	0	0	2	3	10	2	25	3	0	4	0	0	49
TOTAL HRS	1	0	4	89	87	287	198	79	20	4	0	0	769
AVG HRS	0.10	0.0	0.40	8.90	8.70	28.70	19.80	7.90	2.00	0.40	0.0	0.0	76.90

WIND SPEED VS. FREQUENCY

FREQUENCY	525	0	35	355	333	236	86	59	37	13	17	2	7	1	1
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
		WIND SPEED (KNOTS)													

MEAN	3.10 KNOTS
MODE	0.0 KNOTS
MEDIAN	3.00 KNOTS
STO. DEV.	2.52 KNOTS
SKEW	1.23

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	525	525	915	1484	1629	1679	1698	1706	1707
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	525	76	89	120	87	104	78	89	52	100	52	73	32	41	102	57	24
CALM	N	NNE	NE	FNE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	MNW	NW	NNW	
TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

[illegible]

055

VISIBILITY VS. FREQUENCY
 UNIT: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	282	188	390	53	416	4	176	0	198
POSITION	0	1	2	3	4	5	6	7	8

MEAN 3.19/16
MODE 4.00/16
MEDIAN 2.00/16
STC. DEV. 2.49/16
SKEW -0.32

[illegible]

Year	1979	1980	1981	1982
47.99	47.99	47.99	47.99	47.99
7.59	7.59	7.59	7.59	7.59
7.59	7.59	7.59	7.59	7.59
7.11	7.11	7.11	7.11	7.11
0.12	0.12	0.12	0.12	0.12

HAZARDOUS OBSERVATIONS	632	SPECIAL QMS.	1075	TOTAL OBSERVATIONS	3431	FOG WITH SMOKE AND/OR HAZE	244
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WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

WIND ROSE DATA

SFO

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33-DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

PERCENTAGE OF WINDS

DIRECTION	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL								0.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	0	0
TEMPERATURE (F)	<28	28 TO 31	32

CHECK COUNT 0
 FOG WITH LP 0
 FOG WITH FP 2
 ALL FOG CASES 2
 PURE FOG 0
 REC.OBS. 0

FUG WITH SMOKE AND/OR HAZE 0

SFO

SFO

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

SFO

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	3	2	6	37	24	5	0	0	0	0	77
1957	0	0	0	10	0	6	5	18	8	0	0	0	47
1958	0	0	0	2	15	24	29	4	0	0	0	0	74
1959	0	0	0	2	2	2	8	0	3	1	0	0	18
1960	0	0	0	13	2	28	12	0	4	0	0	0	59
1961	0	0	0	2	6	32	52	3	0	0	0	0	95
1962	0	0	1	26	5	114	7	14	1	0	0	0	168
1963	0	0	0	1	5	6	8	15	0	0	0	0	35
1964	0	0	0	2	4	0	1	10	1	0	0	0	18
1965	0	0	2	0	8	0	25	5	0	1	0	0	41
TOTAL HRS	0	0	6	60	53	249	171	74	17	2	0	0	632
AVG HRS	0.0	0.0	0.00	0.00	0.30	24.90	17.10	7.40	1.70	0.20	0.0	0.0	63.20

WIND SPEED VS. FREQUENCY

FREQUENCY	307	160	123	216	288	157	93	39	24	12	16	4	2	0	0

CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	13	>13
	WIND SPEED (KNOTS)														

MEAN	3.10 KNOTS
MODE	0.0 KNOTS
MEDIAN	3.00 KNOTS
STO. DEV.	2.37 KNOTS
SKEN	1.31

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

[illegible]

WIND DIRECTION VS. FREQUENCY

FREQUENCY	3-7	1-1	3-8	3-5	1-4	2-1	2-3	9-3	1-1-4	1-7-8	6-4	7-3	5-4	7-6	6-6	7-7	8-7
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

[illegible]

SIC

VISIBILITY VS. FREQUENCY
NOTE: 7/10 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	508	116	256	18	319	4	79	0	161
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	
	VISIBILITY(MILES)								

STATISTICAL RESULTS

MEAN	2.56/16
MODE	0.0 /16
MEDIAN	2.00/16
STD. DEV.	2.63/16
SKEW	0.97

TEMPERATURE VS. FREQUENCY

[illegible]

STATISTICAL RESULTS

25.57	0.4.
27.59	0.4.
35.50	0.4.
3.55	0.4.
-0.55	0.4.

HOURLY OBSERVATIONS	761	SPECIAL OBS.	700	TOTAL OBSERVATIONS	2124	FOG WITH SMOKE AND/OR HAZE	182
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
TOTAL							

SIC

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	299	138	37	34	14	21	22	86	103	170	63	68	54	75	66	75	85
CALM	N	NINE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	TRUE WIND DIRECTION																

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

STIS

SLC

Wind Rose Data

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS										TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT				
N	1.5	3.1	3.7	0.8	0.4	0.4	0.0	0.0	0.0	9.8	
NNE	0.6	0.9	0.8	0.2	0.1	0.1	0.0	0.0	0.0	2.6	
NE	0.1	0.7	1.3	0.2	0.1	0.0	0.0	0.0	0.0	2.4	
ENE	0.1	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.0	
E	0.6	0.7	0.1	0.1	0.0	0.0	0.0	0.0	0.0	1.5	
ESE	0.1	0.6	0.4	0.4	0.1	0.0	0.0	0.0	0.0	1.6	
SE	0.5	1.2	2.4	0.8	0.4	0.6	0.1	0.0	0.0	6.1	
SSE	0.4	0.9	3.0	1.8	0.9	0.2	0.0	0.0	0.0	7.3	
S	0.8	3.0	5.7	2.2	0.4	0.0	0.0	0.0	0.0	12.1	
SSW	0.5	1.0	2.1	0.2	0.0	0.0	0.0	0.0	0.0	4.5	
SW	0.5	2.1	2.1	0.2	0.0	0.0	0.0	0.0	0.0	5.8	
WSW	0.6	1.3	1.8	0.0	0.0	0.0	0.0	0.0	0.0	3.8	
W	1.1	2.1	1.9	0.2	0.0	0.0	0.0	0.0	0.0	5.3	
WNW	0.7	1.7	1.7	0.6	0.0	0.0	0.0	0.0	0.0	4.7	
NW	0.6	1.4	2.6	0.5	0.2	0.0	0.0	0.0	0.0	5.3	
NNW	1.1	1.8	2.4	0.6	0.0	0.1	0.0	0.0	0.0	6.0	
CALM										21.2	
TOTAL										100.0	

TEMPERATURE VS. FREQUENCY

FREQUENCY 1060 310 32

<28 20 TO 31 32

TEMPERATURE (F)

CHECK COUNT 1410
 FOG WITH LP 6
 FOG WITH FP 177
 ALL FOG CASES 1594
 PURE FOG 1229
 REC.DOS. 741

FOG WITH SMOKE AND/OR HAZE 75

SLC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	1	0	0	0	0	1
1957	0	0	0	0	7	39	8	4	0	0	0	0	58
1958	0	0	0	0	9	5	7	0	0	2	0	0	23
1959	0	0	0	0	0	0	3	0	0	0	0	0	3
1960	0	0	0	0	0	0	36	2	1	0	0	0	39
1961	0	0	0	0	0	8	0	3	0	0	0	0	11
1962	0	0	0	0	0	124	99	108	5	0	0	0	336
1963	0	0	0	0	21	24	1	5	0	0	0	0	51
1964	0	0	0	0	4	0	11	1	1	0	0	0	17
1965	0	0	0	0	0	96	94	0	0	0	0	0	190

TOTAL HRS	0	0	0	0	41	296	259	124	7	2	0	0	729
AVG HRS	0.0	0.0	0.0	0.0	4.10	29.60	25.90	12.40	0.70	0.20	0.0	0.0	72.90

SLC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	1	0	0	1
1957	0	0	0	0	2	0	0	5	0	0	0	0	10
1958	0	0	0	0	0	4	1	3	0	0	0	0	8
1959	0	0	0	0	0	0	3	0	0	0	0	0	3
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	1	0	0	0	0	0	0	1
1963	0	0	0	0	1	0	0	0	0	0	0	0	1
1964	0	0	0	0	0	0	0	0	0	5	0	0	5
1965	0	0	0	0	0	3	1	0	0	0	0	0	4
TOTAL HRS	0	0	0	3	3	8	5	8	0	6	0	0	33
AVG HRS	0.0	0.0	0.0	0.30	0.30	0.80	0.50	0.80	0.0	0.60	0.0	0.0	3.30

WIND SPEED VS. FREQUENCY

FREQUENCY	1415	23	132	427	768	572	278	119	42	18	8	1	0	0	0
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

STATISTICAL RESULTS

MEAN	2.78 KNOTS
MODE	0.0 KNOTS
MEDIAN	3.00 KNOTS
STD. DEV.	2.43 KNOTS
SKEW	1.15

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	1415	1438	1997	3337	3734	3794	3803	3803	3803
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CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUE:CY	145	90	43	37	21	112	208	140	90	57	121	214	399	352	261	145
CALM	N	NNE	NE	ENE	E	ESE	SC	SSE	S	SSW	SW	WSH	W	NNW	NW	NNW
	TRUE WIND DIRECTION															

WIND DIRECTION VS. WIND SPEED

[illegible]

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PDX

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	505	476	916	130	942	31	252	0	551
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	3	1	5	3	7	1	
16	8	16	4	16	3	16	2		

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.30/16
MODE 4.00/16
MEDIAN 3.00/16
STD. DEV. 2.52/16
SKEW -0.28

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	17	39	97	252	389	439	360	457	320	303	231	213	209	198	101	84	45	40	8	1	0	0	0	0	0
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
16	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 38.94 °F.
MODE 37.50 °F.
MEDIAN 37.50 °F.
STD. DEV. 7.31 °F.
SKEW 0.20

HOURLY OBSERVATIONS 1863 SPECIAL OBS. 1940 TOTAL OBSERVATIONS 5317 FOG WITH SMOKE AND/OR HAZE 597

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PDX

WIND SPEED DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.3	0.5	2.0	0.4	0.0	0.0	0.0	3.8
NNE	0.0	0.6	0.9	0.3	0.0	0.0	0.0	1.8
NE	0.1	0.3	0.1	0.3	0.0	0.0	0.0	1.0
ENE	0.0	0.4	0.1	0.0	0.0	0.0	0.0	0.5
E	0.0	0.3	2.0	0.1	0.0	0.0	0.0	2.6
ESE	0.0	0.6	3.0	1.5	0.0	0.0	0.0	5.3
SE	0.0	1.5	2.1	0.4	0.0	0.0	0.0	4.0
SSE	0.0	0.6	1.0	0.6	0.0	0.0	0.0	2.3
S	0.0	1.4	0.9	0.1	0.0	0.0	0.0	2.4
SSW	0.0	0.6	0.4	0.0	0.0	0.0	0.0	1.0
SW	0.1	1.4	2.9	0.1	0.0	0.0	0.0	4.5
WSW	0.1	1.8	4.3	0.5	0.0	0.0	0.0	6.7
W	0.0	1.9	6.7	2.5	0.4	0.0	0.0	11.5
WNW	0.0	1.1	3.0	3.0	0.9	0.1	0.0	8.2
NW	0.0	1.0	4.8	1.5	0.5	0.5	0.0	8.3
NNW	0.0	0.5	1.9	1.3	0.1	0.0	0.0	3.8
CALM								32.4
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 91 466 237

<28 28 TO 31 32
TEMPERATURE (F)

CHECK COUNT 794
FOG WITH LP 1
FOG WITH FP 1
ALL FOG CASES 796
PURE FOG 691
REC'DUS. 413

FOG WITH SMOKE AND/OR HAZE 61

PDX

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	11	27	5	12	0	0	0	0	55
1957	0	0	0	0	23	0	0	11	1	0	0	0	35
1958	0	0	0	0	0	1	0	1	5	0	0	0	7
1959	0	0	0	0	4	13	0	4	0	0	0	0	21
1960	0	0	0	0	2	16	44	2	4	0	0	0	68
1961	0	0	0	0	2	1	2	0	0	0	0	0	5
1962	0	0	0	0	1	4	6	1	6	0	0	0	18
1963	0	0	0	0	1	14	5	0	1	0	0	0	21
1964	0	0	0	0	25	0	3	16	0	0	0	0	44
1965	0	0	0	0	0	16	2	3	0	0	0	0	21

TOTAL HRS	0	0	0	0	69	92	67	50	17	0	0	0	295
AVG HRS	0.0	0.0	0.0	0.0	6.90	9.20	6.70	5.00	1.70	0.0	0.0	0.0	29.50

PDX

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2-MILE-OR-LESS.

WARM FOG

MONTHLY-FOG-FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	3	18	14	28	48	3	12	1	3	0	0	130
1957	0	0	0	32	50	77	0	9	1	12	4	0	185
1958	0	0	0	46	9	41	4	7	9	7	0	0	123
1959	0	0	11	47	41	38	15	2	6	0	0	2	162
1960	0	0	14	32	19	60	23	16	24	11	3	0	202
1961	0	2	13	29	8	26	21	7	6	0	0	0	112
1962	0	0	8	49	17	84	54	16	11	1	0	0	240
1963	0	0	12	24	3	10	30	49	15	0	0	0	144
1964	0	0	14	55	14	19	2	16	0	9	0	0	129
1965	0	0	2	46	24	8	40	21	0	0	0	0	141
TOTAL HRS	1	5	92	374	213	411	192	155	73	43	7	2	1568
AVG HRS	0.10	0.50	9.20	37.40	21.30	41.10	19.20	15.50	7.30	4.30	0.70	0.20	156.80

SEA

69

FREQUENCY	732	48	243	461	502	585	564	391	348	190	175	67	50	30	66
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
		WIND SPEED (KNOTS)													

E 25E SE SSE
TRUE WIND DIRECTION

MEAN	4.91 KNOTS
MODE	0.0 KNOTS
MEDIAN	5.00 KNOTS
STD. DEV.	3.30 KNOTS
SKEW	1.49

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	732	780	1484	2571	3526	4064	4306	4386	4452

	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	732	639	454	398	150	207	224	313	104	266	229	210	92	115	61	114	144
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

[illegible]

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	250	677	1457	74	1316	8	89	0	575
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	2
	VISIBILITY(MILES)								

STATISTICAL RESULTS

MEAN	3.20/16
MODE	2.00/16
MEDIAN	2.00/16
STC. DEV.	2.26/16
SKEW	0.53

TEMPERATURE VS. FREQUENCY

[illegible]

STATISTICAL RESULTS

MEAN	41.62	° F.
MODE	37.50	° F.
MEOLN	39.50	° F.
STD. DEV.	7.97	° F.
SKEW	0.52	

HOURLY OBSERVATIONS	2264	SPECIAL OBS.	2188	TOTAL OBSERVATIONS	7071	FOG WITH SMOKE AND/OR HAZE	284
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YES

SEA

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	118	41	41	68	39	42	55	92	SE	SSE	S	SSW	SW	WSW	W	NNW	NW	NNW
CALM																		

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	3	2	10	4	5	3	4	6	2	1	0	0	1	2
NNE	0	0	2	2	10	12	15	12	13	5	4	5	2	1	0	1	2
NE	0	0	2	10	12	15	12	13	13	3	0	1	0	0	0	0	0
ENE	0	0	3	4	13	10	6	2	1	0	0	0	0	0	0	0	0
E	0	1	3	7	11	5	6	5	3	1	0	0	0	0	0	0	0
ESE	0	2	5	12	4	13	10	4	2	1	1	1	1	1	0	0	0
SE	0	3	13	15	15	22	13	8	9	2	4	0	0	0	1	2	0
SSE	0	1	0	2	1	5	4	2	2	1	0	0	0	0	0	0	0
S	0	1	2	5	1	1	1	1	1	3	0	0	0	0	0	0	0
SSW	0	0	2	6	0	3	2	0	1	0	0	0	0	0	0	0	0
SW	0	0	0	2	2	1	2	0	0	1	0	0	0	0	0	0	0
WSW	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	1	0	1	0	1	2	0	0	0	0	0	0	0	0	0
CALM	0	0	1	1	3	7	0	2	0	0	0	0	0	0	0	0	0
118	0	0	2	0	1	3	0	1	0	0	0	0	0	0	0	0	0
CALM	1	2	3	4	5	6	7	8	9	10	11	12	12	12	12	12	12

SEA

WIND ROSE DATA

SEA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS								TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT		
N	0.0	0.9	4.4	1.4	1.7	0.5	0.2	7.1	
NNE	0.0	0.7	0.9	2.2	1.5	1.2	0.5	7.1	
NE	0.0	2.1	4.6	4.3	0.5	0.2	0.0	11.7	
ENE	0.0	1.2	4.0	1.4	0.2	0.0	0.0	6.7	
E	0.2	1.7	7.8	1.9	0.7	0.0	0.0	7.2	
ESE	0.3	2.9	2.9	2.4	0.5	0.3	0.0	9.5	
SE	0.0	2.8	6.4	3.6	1.9	0.7	0.5	19.8	
SSE	0.2	0.3	1.0	1.0	0.5	0.0	0.0	3.1	
S	0.2	1.2	0.3	0.3	0.5	0.0	0.0	2.6	
SSW	0.0	1.4	0.5	0.3	0.2	0.0	0.0	2.4	
SW	0.0	0.3	0.5	0.3	0.2	0.0	0.0	1.4	
WSW	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.5	
W	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.3	
WNW	0.0	0.2	0.5	0.0	0.0	0.0	0.0	0.7	
NW	0.0	0.3	1.7	0.3	0.0	0.0	0.0	2.4	
NNW	0.0	0.3	0.7	0.2	0.0	0.0	0.0	1.2	
CALM								20.3	
TOTAL								100.0	

TEMPERATURE VS. FREQUENCY

FREQUENCY	30	32	214
TEMPERATURE (F)	28	31	32

CHECK COUNT 581
 FOG WITH LP 7
 FOG WITH FP 24
 ALL FOG CASES 612
 PURE FOG 581
 RECORDS 303

FOG WITH SMOKE AND/OR HAZE 0

SEA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	18	1	7	0	0	0	0	32
1957	0	0	0	0	0	0	1	2	0	0	0	0	3
1958	0	0	0	0	2	0	0	0	0	0	0	0	2
1959	0	0	0	0	0	18	0	2	0	0	0	0	20
1960	0	0	0	0	5	22	0	0	0	0	0	0	27
1961	0	0	0	0	15	0	30	0	1	0	0	0	46
1962	0	0	0	0	1	3	0	0	0	0	0	0	4
1963	0	0	0	0	0	17	12	0	0	0	0	0	29
1964	0	0	0	0	0	9	0	2	0	0	0	0	11
1965	0	0	0	0	0	16	0	0	0	0	0	0	16

TOTAL HRS	0	0	0	0	29	103	44	13	1	0	0	0	190
AVG HRS	0.0	0.0	0.0	0.0	2.90	10.30	4.0	1.30	0.10	0.0	0.0	0.0	19.00

SEA.

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	9	11	55	8	83	78	2	22	4	11	0	0	283
1957	6	16	4	33	59	22	0	30	3	0	4	0	177
1958	6	8	19	48	3	23	18	1	6	1	6	4	143
1959	3	0	15	39	46	74	12	17	0	0	0	1	207
1960	0	3	25	40	7	62	0	0	41	0	3	0	181
1961	5	8	15	34	4	5	39	0	0	1	3	6	120
1962	10	3	27	59	32	41	20	5	9	1	10	4	221
1963	1	14	31	10	1	64	80	40	8	0	0	2	251
1964	1	8	33	50	86	30	3	16	1	0	0	8	242
1965	4	2	37	35	15	10	102	15	0	7	15	7	249
TOTAL HRS	45	73	261	302	336	409	276	146	72	21	41	32	2074
AVG HRS	4.50	7.30	20.10	36.20	33.60	40.90	27.60	14.60	7.20	2.10	4.10	3.20	207.40

MINI AND SPLIT VS. FREQUENCY

FREQUENCY	4	1	5	1	5	7	7	4	5	4	5	0	7	8	9	10	11	12	13	>13
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13						

MEAN	5.25 KNOTS
MODE	4.00 KNOTS
MEDIAN	5.00 KNOTS
STD. DEV.	3.38 KNOTS
SKEW	0.37

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	7	40	130	254	326	371	412	418	430

CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY		93	39	25	37	31	48	20	10	12	54	21	42	15	10	1	3						
CALM		N	NNE	NE	ENE	E	ESE	SE	SSE	TRUE WIND DIRECTION								N			NNE	NE	NNE

WIND DIRECTION VS. WIND SPEED

	H										EST WIND DIRECTION										TRUE WIND DIRECTION							
	0	2	3	0	2	1	2	1	2	1	0	1	2	3	0	1	2	3	0	1	0	1	2	3	0	1	2	3
>12	0	2	3	0	2	1	2	1	2	1	0	1	2	3	0	1	2	3	0	1	0	1	2	3	0	1	2	3
10-12	0	10	9	1	2	9	3	1	0	7	0	7	5	2	3	0	0	1	2	1	0	0	0	0	0	0	0	0
WIND 7-9	0	6	9	12	8	10	8	0	0	7	0	7	5	2	3	0	0	1	2	1	0	0	0	0	0	0	0	0
SPEED 4-6	0	15	5	15	18	16	7	6	7	23	0	23	22	9	6	1	2	1	2	1	0	0	0	0	0	0	0	0
KNUTS 1-3	0	6	4	9	1	12	9	10	4	14	0	14	14	3	1	0	0	2	3	0	0	0	0	0	0	0	0	0
CALM	47	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

NCT

MCI

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	9	39	140	14	1/4	3	5	0	46
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
		-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.42/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 1.98/16
SKEW -0.29

TEMPERATURE VS. FREQUENCY

FREQ.	3	3	2	3	2	9	0	9	44	56	52	21	33	17	0	12	24	8	15	11	15	24	5	1	7	10	15	9	11	3	0
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72	
	16	13	10	16	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	72	

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 41.42 °F.
MODE 31.50 °F.
MEDIAN 37.50 °F.
STD. DEV. 13.12 °F.
SKEW 0.76

HOURLY OBSERVATIONS 418 4 SPECIAL OBS. 12 TOTAL OBSERVATIONS 846 FUG WITH SMOKE AND/OR HAZE 0

MCI

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	12	4	2	5	8	15	12	1	7	26	8	22	8	1	0	0	0
CALM																	
N																	
NNE																	
NE																	
ENE																	
E																	
ESE																	
SE																	
SSE																	
S																	
SSW																	
SW																	
WSW																	
W																	
WNW																	
NW																	
NNW																	
CALM																	

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	12																
CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12				

NCI

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS										TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT				
N	0.0	0.8	1.5	0.0	0.0	0.0	0.0	0.8	3.1		
NNE	0.0	0.0	0.8	0.8	0.0	0.0	0.0	0.0	1.5		
NE	0.0	0.0	1.5	2.3	0.0	0.0	0.0	0.0	3.8		
ENE	0.0	0.0	1.5	2.3	0.8	1.5	0.0	0.0	6.1		
E	0.0	0.0	2.3	3.1	3.1	3.1	0.0	0.0	11.5		
ESE	0.0	0.0	1.5	4.6	0.8	2.3	0.0	0.0	9.2		
SE	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8		
SSE	0.0	0.8	3.8	0.8	0.0	0.0	0.0	0.0	5.3		
S	0.0	4.6	3.1	5.3	1.5	3.8	1.5	0.0	19.8		
SSW	0.0	3.1	1.5	0.0	0.0	1.5	0.0	0.0	6.1		
SW	0.0	6.1	5.3	4.6	0.0	0.8	0.0	0.0	16.8		
WSW	0.0	0.8	2.3	1.5	0.8	0.0	0.8	0.0	6.1		
W	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.8		
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.2		
TOTAL									100.0		

TEMPERATURE VS. FREQUENCY

FREQUENCY	26	71	34

	<28 28 TO 31 32		
	TEMPERATURE (F)		

CHECK COUNT 131
 FOG WITH LP 57
 FOG WITH FP 62
 ALL FOG CASES 249
 PURE FOG 131
 REC.OBS. 128

FOG WITH SMOKE AND/OR HAZE 0

NCI

MCI

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	2	15	0	0	0	0	0	17
1959	0	0	0	0	0	0	1	0	0	0	0	0	1
1960	0	0	0	0	0	0	12	0	0	0	0	0	12
1961	0	0	0	0	0	5	0	6	0	0	0	0	11
1962	0	0	0	0	0	0	0	6	0	0	0	0	6
1963	0	0	0	0	0	0	34	5	3	0	0	0	42
1964	0	0	0	0	0	3	0	0	0	0	0	0	3
1965	0	0	0	0	0	0	0	0	2	0	0	0	2

TOTAL HRS	0	0	0	0	0	10	62	17	5	0	0	0	94
AVG HRS	0.0	0.0	0.0	0.0	0.0	1.00	6.20	1.70	0.50	0.0	0.0	0.0	9.40

MCI

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	2	0	0	11	0	0	0	0	0	0	13
1958	0	5	0	0	0	10	2	0	5	1	0	1	24
1959	0	0	2	8	0	10	6	7	0	9	2	0	44
1960	0	0	0	0	0	0	37	21	0	0	0	0	58
1961	0	2	3	5	8	5	0	4	2	10	0	0	39
1962	4	0	2	2	0	11	6	3	0	0	2	7	37
1963	2	1	3	0	3	0	17	1	2	1	0	0	30
1964	0	0	12	11	13	5	1	0	0	5	0	0	47
1965	0	2	8	0	0	0	9	0	0	14	0	0	33
TOTAL HRS	6	10	32	26	24	52	78	36	9	40	4	8	325
AVG HRS	0.60	1.00	3.20	2.60	2.40	5.20	7.80	3.60	0.90	4.00	0.40	0.80	32.50

FREQUENCY	108	0	73	70	69	64	75	28	30	8	12	3	0	0	0

CALM	1	2	3	4	4	6	7	8	9	10	11	12	13	13	>13
	WIND SPEED (KNOTS)														

MEAN	3.83 KNOTS
MODE	0.0 KNOTS
MEDIAN	4.00 KNOTS
STD. DEV.	2.66 KNOTS
SKEW	1.44

CUMULATIVE FREQUENCY	108	108	251	404	507	545	560	560	560
	CALM	< 2	< 4	< 6	< 8	< 10	< 12	< 14	TOTAL
						WIND SPEED (KNOTS)			

FREQUENCY	216	69	9	0	1	2	2	3	10	17	24	71	43	55	64	80
CALM	N	NNE	NE	E	ENE	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNh
	TRUE WIND DIRECTION															

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MILA

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	15	67	120	8	206	1	6	0	129
POSITION	0	1	2	3	4	5	6	7	8

STATISTICAL RESULTS

MEAN	4.01/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.48/16
SKEW	0.00

TEMPERATURE VS. FREQUENCY

[illegible]

STATISTICAL RESULTS

Parameter	Value	Unit
Mean	64.57	OF.
Std.	5.50	OF.
Min.	5.50	OF.
Max.	74.9	OF.
K	-0.14	

HUGELY OBSERVATIONS	215.4	SPECIAL OBS.	347	TOTAL OBSERVATIONS	910	FOG WITH SMOKE AND/OR HAZE	137
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MIA

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12				
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

MIA

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS						
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL							0.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	0	0

<28 28 TO 31 32			
TEMPERATURE (F)			

CHECK COUNT 0
 FOG WITH LP 0
 FOG WITH FP 0
 ALL FOG CASES 0
 PURE FOG 0
 REC-OBS. 0

FOG WITH SMOKE AND/OR HAZE 0

MIA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG												
MONTHLY FOG FREQUENCY												
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	0	0	0	0	0
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MIA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	1	1	2	0	0	0	0	0	4
1957	0	0	0	0	1	10	17	2	10	0	0	0	40
1958	0	0	0	0	9	3	0	0	0	0	2	0	14
1959	0	0	0	0	0	0	9	0	2	0	0	0	11
1960	0	0	0	0	3	0	0	2	0	0	0	0	5
1961	0	0	3	0	4	0	3	0	0	4	0	0	14
1962	0	0	0	0	3	3	8	30	0	0	1	0	45
1963	0	0	2	0	9	6	20	3	0	3	0	0	43
1964	0	0	0	0	6	5	0	5	0	3	0	0	19
1965	0	0	0	3	0	4	5	0	6	0	0	0	18
TOTAL HRS	0	0	5	3	36	32	64	42	18	10	3	0	213
AVG HRS	0.0	0.0	0.50	0.30	3.60	3.20	6.40	4.20	1.80	1.00	0.30	0.0	21.30

WIND SPEED VS. FREQUENCY

FREQUENCY	613	9	128	361	451	342	261	193	136	48	47	6	13	2	2
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

MEAN	3.85 KNOTS
MODE	0.0 KNOTS
MEDIAN	4.00 KNOTS
STD. DEV.	2.79 KNOTS
SKEW	1.38

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	613	622	1111	1904	2358	2542	2595	2610	2612
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	1223	134	122	119	205	135	108	122	200	224	130	92	40	47	43	51	84
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	SSW	SW	W	NNW	NN	NNW
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

[illegible]

MSY

VISIBILITY VS. FREQUENCY
NOTE: 7/16 FILE IS NOT A REPORTABLE VALUE

FREQUENCY	58	245	713	56	963	12	59	0	486
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
		~	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	2
	VISIBILITY(MILES)								

STATISTICAL RESULTS

MEAN	3.86/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.32/16
SKEW	-0.06

TEMPERATURE VS. FREQUENCY

[illegible]

STATISTICAL RESULTS

W.L.N.	59.01	% F.
CCN	59.50	% F.
W.L.N.	59.50	% F.
STD. DEV.	7.24	% F.
SKW	-0.07	

HOURLY OBSERVATIONS	1154 ..	SPECIAL OBS.	1458	TOTAL OBSERVATIONS	3029	FLG WITH SMOKE	AND/OR HAZE	1216
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MSY

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F), AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	0	0	0	0	1	0	0	0	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NNN
CALM																			
TRUE WIND DIRECTION																			

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

MSY

WIND RUSH DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	1	0	0

<28 28 TO 31 32			
TEMPERATURE (F)			

CHECK COUNT	1
FUG WITH LP	1
FUG WITH FP	0
ALL FOG CASES	2
PURE FOG	0
REC.OBS.	0

FUG WITH SMOKE AND/OR HAZE 0

MSY

MSY

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL HRS	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

MSY

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	1	0	16	58	2	1	36	3	4	0 121
1957	0	0	0	0	0	17	26	58	29	11	1	0	0 143
1958	0	0	0	0	0	24	8	0	5	13	2	0	0 52
1959	4	0	0	0	15	20	0	24	49	1	14	2	0 129
1960	0	0	0	0	6	4	25	65	6	18	6	2	0 132
1961	0	0	3	6	17	33	13	16	2	5	0	3	98
1962	0	0	0	4	4	62	37	24	5	1	0	0	138
1963	0	0	0	6	19	5	35	7	13	4	0	0	89
1964	0	0	0	5	17	49	49	5	6	1	1	0	133
1965	0	0	0	7	26	27	18	23	11	7	0	0	119

TOTAL HRS 4 0 4 49 164 294 301 165 15 44 10 3 1154
AVG HRS 0.40 0.0 0.40 4.90 16.40 29.40 30.10 16.50 11.60 4.40 1.00 0.30 115.40

WIND SPEED VS. FREQUENCY

STATISTICAL RESULTS

MEAN	5.09 KNOTS
MODE	5.00 KNOTS
MEDIAN	5.00 KNOTS
STD. DEV.	2.94 KNOTS
SKEW	0.03

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	213	284	964	1797	2395	2773	2939	3003	3021

CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	426	114	103	153	245	264	376	319	324	270	135	100	91	76	89	82	67
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	W	NNW	NNW
TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

[illegible]

VISIBILITY VS. FREQUENCY
NOTE: 7/10 PILE IS NCI A REPORTABLE VALUE

FREQUENCY	80	325	743	140	990	30	158	0	515
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
		-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	2
	VISIBILITY(MILES)								

MEAN	3.82/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.31/16
SKEW	-0.08

TEMPERATURE VS. FREQUENCY

[illegible]

MEAN	59.92 OF.
MODE	61.50 OF.
MEDLN	61.50 OF.
STD. DEV.	7.39 OF.
SKW	-0.21

HOURLY OBSERVATIONS	1464	SPECIAL OBS.	1557	TOTAL OBSERVATIONS	5143	FUG WITH SMOKE AND/OR HAZE	714
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WIND DIRECTION VS. FREQUENCY

[illegible][illegible]

IAH

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	16.7	33.3	0.0	0.0	0.0	0.0	0.0	50.0
WNW	0.0	0.0	16.7	0.0	0.0	0.0	0.0	16.7
NW	0.0	16.7	16.7	0.0	0.0	0.0	0.0	33.3
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								0.0
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	5	1
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TEMPERATURE (F)	<28	28 TO 31	32
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CHECK COUNT	6
FOG WITH LP	1
FOG WITH FP	6
ALL FOG CASES	12
PURE FOG	6
REC.OBS.	4

FOG WITH SMOKE AND/OR HAZE	0
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IAH

IAH

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	3	0	0	0	0	0	3
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	3	0	0	0	0	0	3
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.30	0.0	0.0	0.0	0.0	0.0	0.30

IAH

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	6	5	29	22	14	26	15	6	0	123
1957	0	0	2	5	13	7	63	42	19	2	0	1	154
1958	0	0	2	1	57	20	8	8	16	18	3	0	133
1959	0	0	5	14	29	9	20	35	17	8	8	0	145
1960	0	0	1	17	13	50	30	3	47	5	1	1	168
1961	0	0	0	4	15	31	18	21	15	3	0	0	113
1962	0	0	1	1	0	56	24	59	14	15	8	3	181
1963	0	0	0	10	13	5	24	8	34	1	0	0	95
1964	0	0	0	18	14	30	47	16	10	12	10	0	166
1965	0	0	3	27	60	17	19	18	25	10	4	0	183
TOTAL HRS	0	0	20	103	219	263	275	224	223	89	40	5	1461
AVG HRS	0.0	0.0	2.00	10.30	21.90	26.30	27.50	22.40	22.30	8.90	4.00	0.50	146.10

90

PH.

VISIBILITY VS. FREQUENCY
NOTE: 7/10 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	117	141	304	64	420	6	187	0	277
POSITION	0	1	2	3	4	5	6	7	8

MEAN	3.87/16
MODE	4.00/16
MEDIAN	4.00/16
STC. DEV.	2.53/16
SKEN	-0.05

FREQ.	13	0	0	0	1	0	0	6	37	48	46	52	84	78	89	87	97	120	61	73	72	37	72	45	74	83	44	49	58	70	42	13	
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72			
	30	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72				

MEAN	48.84	° F.
MODE	45.50	° F.
MEDIAN	47.50	° F.
STD. DEV.	12.81	° F.
SKEW	0.26	

HOURLY OBSERVATIONS	660	SPECIAL OBS.	896	TOTAL OBSERVATIONS	4643	FLG WITH SMOKE AND/OR HAZE	1393
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PHL

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	28	2	4	1	2	12	9	13	2	10	5	19	33	3	4	1
CALM		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW
TRUE WIND DIRECTION																

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
E	0	0	0	0	1	1	2	2	1	1	2	0	0	0	0	0
ESE	0	0	2	1	1	1	3	1	0	0	0	0	0	0	0	0
SE	0	0	0	4	3	1	3	1	0	0	0	0	0	0	0	0
SSE	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
S	0	0	1	4	4	0	0	1	0	0	0	0	0	0	0	0
SSW	0	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0
SW	0	0	0	2	0	3	6	1	2	2	1	2	0	0	0	0
WSW	0	0	1	2	8	2	6	4	2	3	1	0	0	0	0	0
W	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0
WNW	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0
NW	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
CALM	28															
WIND SPEED																
CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12			

PHL

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
NNE	0.0	0.0	2.6	0.0	0.0	0.0	0.0	2.6
NE	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7
ENE	0.0	0.0	0.7	0.0	0.7	0.0	0.0	1.3
E	0.0	0.0	1.3	2.6	2.0	2.0	0.0	7.9
ESE	0.0	2.0	1.3	2.0	0.7	0.0	0.0	6.0
SE	0.0	2.6	2.6	2.6	0.7	0.0	0.0	8.6
SSE	0.0	0.0	1.3	0.0	0.0	0.0	0.0	1.3
S	0.0	3.3	2.6	0.7	0.0	0.0	0.0	6.6
SSW	0.0	2.0	0.0	0.7	0.0	0.7	0.0	3.3
SW	0.0	1.3	2.0	4.6	2.6	2.0	0.0	12.6
WSW	0.0	2.0	6.6	6.6	4.0	2.6	0.0	21.9
W	0.0	0.7	0.7	0.0	0.7	0.0	0.0	2.0
WNW	0.0	0.0	1.3	0.7	0.0	0.0	0.0	2.0
NW	0.0	1.3	1.3	0.0	0.0	0.0	0.0	2.6
NNW	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
CALM								18.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	40	95	16

	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 151
 FOG WITH LP 20
 FOG WITH FP 84
 ALL FOG CASES 253
 PURE FOG 0
 REC-OBS. 71

FOG WITH SMOKE AND/OR HAZE 71

PHL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	1	0	0	10	0	0	0	0	11
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	1	3	8	0	0	0	0	9
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	3	5	7	0	0	0	0	15
1962	0	0	0	0	0	0	1	14	0	0	0	0	15
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	1	0	0	0	0	0	1
1965	0	0	0	0	0	3	8	0	0	0	0	0	11
TOTAL HRS	0	0	0	0	1	7	15	39	0	0	0	0	62
AVG HRS	0.0	0.0	0.0	0.0	0.10	0.70	1.50	3.90	0.0	0.0	0.0	0.0	6.20

PHL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG												
MONTHLY FOG FREQUENCY												
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE TOTAL
1956	0	1	5	4	8	36	6	2	2	11	1	7 83
1957	0	0	5	3	2	1	15	14	0	8	2	11 61
1958	0	4	2	4	13	5	0	0	0	1	7	5 41
1959	0	0	10	2	8	22	4	7	8	2	0	0 63
1960	2	2	4	10	11	0	0	0	0	0	5	4 38
1961	4	0	1	16	8	9	12	29	3	0	14	4 100
1962	2	13	0	11	0	6	5	23	0	1	0	1 62
1963	0	2	9	27	2	0	20	3	5	0	0	3 71
1964	2	0	0	0	4	18	8	0	4	4	1	4 45
1965	4	3	4	1	0	3	0	16	0	0	3	0 34
TOTAL HRS	14	25	40	78	56	100	70	94	22	27	33	39 598
AVG HRS	1.40	2.50	4.00	7.80	5.60	10.00	7.00	9.40	2.20	2.70	3.30	3.90 59.80

PHL

■

DCA

DCA

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	3	58	202	116	259	43	156	0	139
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	2

MEAN	4.21/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.11/16
SKewn	9.10

TEMPERATURE VS. FREQUENCY																															
FREQ.	0	0	0	0	0	0	19	4	20	31	54	83	25	55	54	106	63	80	63	59	38	16	53	40	63	36	4	2	1	4	5
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	72	
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72			

MEAN	46.35	° F.
MODE	43.50	° F.
MEDIAN	45.50	° F.
STD. DEV.	10.15	° F.
SKREW	0.28	

HOURLY OBSERVATIONS	35:2	SPECIAL OBS.	626	TOTAL OBSERVATIONS	2526	FOG WITH SMOKE AND/OR HAZE	76
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WIND DIRECTION VS. FREQUENCY

FREQUENCY	12	0	0	2	0	0	0	0	1	5	20	17	11	3	1	1	0	1
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
	TRUE WIND DIRECTION																	

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	2	0	2	1	1	1	0	0	0	0	0	0
SSW	0	0	0	0	2	1	4	5	2	1	3	0	0	0
SW	0	0	0	1	2	1	1	4	2	3	0	0	0	0
WSW	0	0	0	1	2	1	1	0	0	0	0	0	0	0
W	0	0	1	0	1	0	0	0	0	0	0	0	0	0
NNW	0	0	1	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	12	0	0	0	0	0	0	0	1	0	0	0	0	0

DCA

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.7
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	1.4	2.7	2.7	0.0	0.0	0.0	0.0	1.4
S	2.7	5.4	9.5	4.1	5.4	0.0	0.0	6.8
SSW	0.0	2.7	6.8	9.5	4.1	0.0	0.0	27.0
SW	0.0	4.1	4.1	6.8	0.0	0.0	0.0	23.0
WSW	1.4	1.4	1.4	0.0	0.0	0.0	0.0	14.9
W	0.0	1.4	0.0	0.0	0.0	0.0	0.0	4.1
WNW	1.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4
CALM								16.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	23	38	13

	<28 28 TO 31 32		
	TEMPERATURE (F)		

CHECK COUNT 74
 FOG WITH LP 7
 FOG WITH FP 117
 ALL FOG CASES 198
 PURE FOG 62
 REC-OBS. 30

FOG WITH SMOKE AND/OR HAZE 4

DCA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	1	0	0	0	0	0	1
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	1	0	0	0	0	0	0	1
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	13	0	7	0	0	0	0	20
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	1
1965	0	0	0	0	0	0	1	0	0	0	0	0	1

TOTAL HRS	0	0	0	0	0	14	2	8	0	0	0	0	24
AVG HRS	0.0	0.0	0.0	0.0	0.0	1.40	0.20	0.80	0.0	0.0	0.0	0.0	2.40

100

DCA

DCA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	1	0	0	3	5	24	0	0	0	6	5	0	44
1957	0	0	0	0	8	0	18	4	0	1	0	0	31
1958	0	0	1	6	7	0	0	0	0	2	0	0	16
1959	0	0	0	1	7	2	0	13	6	2	0	0	31
1960	0	0	0	8	3	1	2	0	0	0	2	0	16
1961	0	0	0	5	0	15	5	3	12	0	3	1	44
1962	0	0	0	0	1	0	4	27	1	0	1	0	34
1963	0	0	5	10	0	0	19	2	4	0	0	0	40
1964	0	0	0	0	1	28	4	0	9	4	1	0	47
1965	0	0	2	4	0	3	2	14	0	0	0	0	25

TOTAL HRS 1 0.10 0.0 0.80 3.70 3.20 7.30 5.40 6.30 3.20 1.50 1.20 0.10 328
AVG HRS 0.10 0.0 0.80 3.70 3.20 7.30 5.40 6.30 3.20 1.50 1.20 0.10 0.10 32.80

ATL

WIND SPEED VS. FREQUENCY

FREQUENCY	246	1	86	215	294	283	206	221	164	70	112	30	17	8	13
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
WIND SPEED (KNOTS)															

STATISTICAL RESULTS

MEAN 5.12 KNOTS
MODE 4.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 3.03 KNOTS
SKEN 0.37

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	246	247	548	1125	1552	1786	1928	1953	1966
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
WIND SPEED (KNOTS)									

WIND DIRECTION VS. FREQUENCY

FREQUENCY	492	27	15	97	212	376	154	128	77	89	57	82	100	131	74	68	33
CALM		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

WIND SPEED (KNOTS)	>12	10-12	7-9	4-6	1-3	CALM	246	0	0	0	2	2	5	5	0	0	0	0	2	4	0	0	1	0	0	5	11	0	0	3
WIND DIRECTION																														
WIND DIRECTION																														

ATL

102

VISIBILITY VS. FREQUENCY
NOTE: 7/16 FILE IS NOT A REPORTABLE VALUE

FREQUENCY	24	74	427	103	264	29	92	0	553
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	
	VISIBILITY(MILES)								

MEAN	4.58/16
MODE	4.00/16
MEDIAN	4.03/16
STO. DEV.	2.41/16
SKEW	0.24

FREQ.	TEMPERATURE VS. FREQUENCY															
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45
	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47
	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49
	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51
	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53
	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55
	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57
	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59
	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61
	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63
	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65
	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67
	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69
	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71
	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73
	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75
	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75	77
	49	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79
	51	53	55	57	59	61	63	65	67	69	71	73	75	77	79	81
	53	55	57	59	61	63	65	67	69	71	73	75	77	79	81	83
	55	57	59	61	63	65	67	69	71	73	75	77	79	81	83	85
	57	59	61	63	65	67	69	71	73	75	77	79	81	83	85	87
	59	61	63	65	67	69	71	73	75	77	79	81	83	85	87	89
	61	63	65	67	69	71	73	75	77	79	81	83	85	87	89	91
	63	65	67	69	71	73	75	77	79	81	83	85	87	89	91	93
	65	67	69	71	73	75	77	79	81	83	85	87	89	91	93	95
	67	69	71	73	75	77	79	81	83	85	87	89	91	93	95	97
	69	71	73	75	77	79	81	83	85	87	89	91	93	95	97	99
	71	73	75	77	79	81	83	85	87	89	91	93	95	97	99	101
	73	75	77	79	81	83	85	87	89	91	93	95	97	99	101	103
	75	77	79	81	83	85	87	89	91	93	95	97	99	101	103	105
	77	79	81	83	85	87	89</									

MEAN	55.87	° F.
MODE	69.50	° F.
MEDIAN	55.50	° F.
STD. DEV.	10.44	° F.
SKEW	-1.31	

HOURLY OBSERVATIONS	725	SPECIAL OBS.	1241	TOTAL OBSERVATIONS	7962	FUG WITH SMOKE AND/OR HAZE	21
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WIND DIRECTION VS. FREQUENCY

[illegible][illegible]

CALM	1	2	3	4	5	6	7	8	9	10	11	12 >12
WIND SPEED												

ATL

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS								TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT		
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	11.4	0.0	0.0	11.4	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	2.9	0.0	0.0	0.0	0.0	0.0	5.7	0.0
SSE	0.0	2.9	5.7	2.9	0.0	0.0	0.0	11.4	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	8.6	5.7	5.7	0.0	0.0	20.0	0.0
W	0.0	0.0	8.6	2.9	0.0	0.0	0.0	11.4	0.0
WNW	0.0	0.0	2.9	5.7	8.6	5.7	0.0	22.9	0.0
NW	0.0	0.0	2.9	2.9	5.7	2.9	0.0	14.3	0.0
NNW	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.9	0.0
CALM									0.0
TOTAL									100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	8	15	12
TEMPERATURE (F)	28	28	32

CHECK COUNT 35
 FOG WITH LP 12
 FOG WITH FP 0
 ALL FOG CASES 47
 PURE FOG 35
 REC.OBS. 13

FOG WITH SMOKE AND/OR HAZE 0

ATL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	4	0	0	0	0	0	4
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	4	0	0	0	0	0	4
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	2	0	0	0	0	2

TOTAL HRS	0	0	0	0	0	0	8	2	0	0	0	0	10
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.80	0.20	0.0	0.0	0.0	0.0	1.00

ATL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	1	3	2	2	10	4	28	6	1	1	0	66
1957	1	0	11	0	18	10	12	38	11	1	0	7	109
1958	9	3	4	0	3	6	4	0	1	4	0	0	34
1959	6	5	1	3	6	3	5	10	0	2	7	0	48
1960	1	1	10	4	6	6	24	0	8	3	3	1	67
1961	7	12	4	2	4	7	0	7	6	6	5	0	60
1962	0	1	2	4	2	15	14	10	13	9	3	1	74
1963	6	1	3	0	13	1	16	8	9	0	4	9	70
1964	19	5	0	3	9	35	6	7	9	4	2	0	99
1965	15	3	9	0	11	6	1	12	9	19	0	3	88
TOTAL HRS	66	32	47	18	80	99	86	120	72	49	25	21	715
AVG HRS	6.60	3.20	4.70	1.80	8.00	9.90	8.60	12.00	7.20	4.90	2.50	2.10	71.50

BHM

WIND SPEED VS. FREQUENCY

FREQUENCY	234	0	7	85	56	48	33	25	22	3	6	3	2	1	3
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

STATISTICAL RESULTS

MEAN 2.80 KNOTS
 MODE 0.0 KNOTS
 MEDIAN 3.00 KNOTS
 STD. DEV. 3.02 KNOTS
 SKEW 0.93

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	234	234	326	430	488	513	522	525	528
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	468	35	29	25	10	14	6	10	14	4	10	11	8	21	29	36	32
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

	>12	10-12	7-9	4-6	1-3	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
WIND SPEED	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0
KNOTS	0	0	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
	0	21	8	13	4	4	4	2	3	8	1	7	5	2	12	9	17	21				
	0	7	15	9	6	10	4	6	2	3	2	3	3	3	5	4	6					
CALM	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TRUE WIND DIRECTION																					

BHM

BHM

VISIBILITY VS. FREQUENCY NOTE: 7/16 WILL IS NOT A REPORTABLE VALUE

FREQUENCY	84	46	75	0	132	0	9	0	182
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	1	3	1	5	3	7	1
16	8	16	4	16	8	16	2		

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.23/16
MODE 8.00/16
MEDIAN 4.00/16
STD. DEV. 3.07/16
SKEW -1.23

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	0	14	6	7	17	54	16	26	18	24	43	43	33	36	43	23	22	18	26	22	23	19	34	4
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72			
16	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72				

TEMPERATURE(F)

STATISTICAL RESULTS

MEAN 53.00 °F.
MODE 39.50 °F.
MEDIAN 53.50 °F.
STD. DEV. 11.03 °F.
SKEW 1.22

HOURLY OBSERVATIONS 233 SPECIAL OBS. 295 TOTAL OBSERVATIONS 1127 FOG WITH SMOKE AND/OR HAZE 213

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE: LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE; TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

OFF

BHM

BHM

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	
N	0.0	14.3	0.0	0.0	0.0	0.0	0.0	14.3
NNE	0.0	14.3	0.0	0.0	0.0	0.0	0.0	14.3
NE	0.0	0.0	7.1	0.0	0.0	0.0	0.0	7.1
ENE	0.0	7.1	0.0	0.0	0.0	0.0	0.0	7.1
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.1
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 0 11 3

29 28 TO 31 32
TEMPERATURE (F)

CHECK COUNT 14
FOG WITH LP 0
FOG WITH FP 0
ALL FOG CASES 14
PURE FOG 0
REC.OBS. 7

FOG WITH SMOKE AND/OR HAZE 7

BHM

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	4	0	0	0	0	0	4
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	4	0	0	0	0	0	4
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.40	0.0	0.0	0.0	0.0	0.0	0.40

BHM

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	11	10	0	6	0	0	0	0	0	27
1957	0	0	5	2	2	0	2	3	0	0	0	0	14
1958	0	0	0	1	8	1	0	0	0	0	0	3	13
1959	0	0	1	0	0	0	1	0	0	0	0	3	5
1960	0	0	5	6	7	1	2	5	0	0	0	0	26
1961	5	0	0	1	1	2	0	0	3	0	2	4	18
1962	1	2	0	0	0	30	2	0	0	2	0	5	42
1963	0	1	5	0	10	1	4	0	8	0	0	1	30
1964	0	6	0	4	11	7	0	0	1	0	0	0	29
1965	10	0	0	0	2	0	0	6	4	0	3	0	25
TOTAL HRS	16	9	16	25	51	42	17	14	16	2	5	16	229
AVG HRS	1.60	0.90	1.60	2.50	5.10	4.20	1.70	1.40	1.60	0.20	0.50	1.60	22.90

BNA

WIND SPEED VS. FREQUENCY

FREQUENCY	357	25	53	111	104	70	20	15	8	4	4	2	2	0	0
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
WIND SPEED (KNOTS)															

STATISTICAL RESULTS

MEAN 2.12 KNOTS
 MODE 0.0 KNOTS
 MEDIAN 2.00 KNOTS
 STD. DEV. 2.38 KNOTS
 SKEW 0.89

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	357	302	546	720	755	767	773	775	775
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
WIND SPEED (KNOTS)									

WIND DIRECTION VS. FREQUENCY

FREQUENCY	714	45	33	47	23	29	18	39	16	38	14	12	13	14	17	38	22
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

>12	10-12	7-9	4-6	1-3	CALM	357	0	0	0	0	0	0	0	0	0	0	0
WIND	7-9	4-6	1-3														
SPEED	7-9	4-6	1-3														
KNOTS	7-9	4-6	1-3														
TRUE WIND DIRECTION																	

BNA

NOTE: 7/10 PILE IS NOT A REPORTABLE VALUE

FREQUENCY	78	146	154	11'	222	1	34	0	129
POSITION	0	1	2	3	4	5	6	7	8

VISIBILITY(MILES)	16	8	16	4	16	8	16	2	
POSITION	0	1	1	3	1	5	3	7	1

STATISTICAL RESULTS

MEAN	3.38/16
MODE	4.00/16
MEDIAN	3.00/16
STD. DEV.	2.56/16
SKEW	-0.24

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	2	7	12	2	15	17	14	16	27	17	22	56	34	23	46	56	47	16	15	36	46	28	51	37	49	47	36	1
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75
16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78

STATISTICAL RESULTS

MEAN	51.88	°F.
MODE	41.50	°F.
MEDIAN	51.50	°F.
STD. DEV.	13.16	°F.
SKEW	0.79	

HOURLY OBSERVATIONS	411	SPECIAL OBS.	364	TOTAL OBSERVATIONS	1581	FUG WITH SMOKE AND/OR HAZE	127
DISCARDS	0	DISCARD NO.	39				

WIND DIRECTION VS. FREQUENCY

FREQUENCY	24	3	4	9	6	10	4	1	1	1	0	2	1	2	0	0
CALM	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NW	NNW	NNW
TRUE WIND DIRECTION																

[illegible]

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	1.4	2.9	0.0	0.0	0.0	0.0	4.3
NNE	0.0	2.9	2.9	0.0	0.0	0.0	0.0	5.8
NE	1.4	8.7	2.9	0.0	0.0	0.0	0.0	13.0
ENE	0.0	4.3	4.3	0.0	0.0	0.0	0.0	8.7
E	0.0	10.1	4.3	0.0	0.0	0.0	0.0	14.5
ESE	0.0	1.4	4.3	0.0	0.0	0.0	0.0	5.8
SE	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
SSE	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
S	0.0	1.4	0.0	0.0	0.0	0.0	0.0	1.4
SSW	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
SW	0.0	0.0	2.9	0.0	0.0	0.0	0.0	2.9
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	1.4	0.0	1.4
WNW	0.0	0.0	0.0	0.0	0.0	1.4	0.0	2.9
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								34.8
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	31	35	3

	<28	28 TO 31	32
	TEMPERATURE (F)		

CHECK COUNT 69
 FOG WITH LP 8
 FOG WITH FP 32
 ALL FOG CASES 107
 PURE FOG 46
 REC.OBS. 41

FOG WITH SMOKE AND/OR HAZE 11

BNA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	3	0	0	0	0	0	3
1960	0	0	0	0	4	2	0	0	0	0	0	0	6
1961	0	0	0	0	0	0	3	0	0	0	0	0	3
1962	0	0	0	0	0	4	0	0	0	0	0	0	8
1963	0	0	0	0	0	0	1	0	0	0	0	0	1
1964	0	0	0	0	0	0	12	6	0	0	0	0	18
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	4	10	19	6	0	0	0	0	39
AVG HRS	0.0	0.0	0.0	0.0	0.40	1.00	1.90	0.60	0.0	0.0	0.0	0.0	3.90

BN:

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG												
MONTHLY FOG FREQUENCY												
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE TOTAL
1956	0	6	0	8	4	12	0	6	0	0	0	36
1957	1	0	0	1	6	1	1	1	0	0	6	19
1958	0	1	4	6	8	5	1	0	2	6	2	36
1959	4	1	6	5	0	4	3	0	5	3	2	33
1960	16	6	4	15	5	0	4	0	0	1	2	56
1961	4	12	1	0	2	2	1	0	0	0	0	26
1962	3	2	5	0	0	7	0	3	0	1	2	23
1963	0	12	0	0	38	0	12	1	1	0	0	64
1964	6	7	4	20	0	0	1	0	6	0	1	43
1965	1	0	8	1	16	0	0	0	0	0	4	34
TOTAL HRS	35	47	32	55	79	31	23	11	14	11	19	372
AVG HRS	3.50	4.70	3.20	5.60	7.90	3.10	2.30	1.10	1.40	1.10	1.90	37.20

CAL

WIND SPEED VS. FREQUENCY

FREQUENCY	36	2	25	62	60	53	21	25	30	11	23	4	9	5	3
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13

WIND SPEED (KNOTS)

STATISTICAL RESULTS

MEAN 5.07 KNOTS
MODE 3.00 KNOTS
MEDIAN 4.00 KNOTS
STD. DEV. 3.19 KNOTS
SKEW 0.65

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	36	38	125	238	284	325	352	366	369
	CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL

WIND SPEED (KNOTS)

WIND DIRECTION VS. FREQUENCY

FREQUENCY	72	14	5	18	11	11	11	10	53	34	41	11	35	18	17	13	24	18
	CALM	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		

TRUE WIND DIRECTION

WIND DIRECTION VS. WIND SPEED

120

WIND SPEED (KNOTS)	>12	10-12	7-9	4-6	1-3	CALM	36	38	125	238	284	325	352	366	369

DAI

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	37	26	89	2	3	4	5	6	7	8
POSITION	0	1	2	3	4	5	6	7	8	
	0	1	1	3	1	5	3	7	1	
	-	-	-	-	-	-	-	-	-	
	16	8	16	4	10	8	16	2		
	VISIBILITY(MILES)									

MEAN	3.92/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.69/16
SKEW	-0.03

[illegible]

NEW	50.00	5.
COM	45.50	6.
CON	43.50	4.
STD. DEV.	7.97	5.
SKW	0.57	

Hourly Observations	165	Special Obs.	204	Total Observations	937	Fog with Smoke and/or Haze
Hourly Observations	165	Special Obs.	204	Total Observations	937	Fog with Smoke and/or Haze

WIND DIRECTION VS. FREQUENCY

FREQUENCY	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NW	NNW	
TRUE WIND DIRECTION																	

[illegible]

WINU ROS. DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WIND'S							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	60.7	0.0	0.0	0.0	0.0	0.0	60.7
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM	0.0	33.3	0.0	0.0	0.0	0.0	0.0	33.3
TOTAL	0.0	60.7	0.0	0.0	0.0	0.0	0.0	60.7

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	3	0
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TEMPERATURE (F)

Case	Count	Percentage
1	1	1.0
2	1	1.0
3	1	1.0
4	1	1.0
5	1	1.0
6	1	1.0
7	1	1.0
8	1	1.0
9	1	1.0
10	1	1.0
11	1	1.0
12	1	1.0
13	1	1.0
14	1	1.0
15	1	1.0
16	1	1.0
17	1	1.0
18	1	1.0
19	1	1.0
20	1	1.0
21	1	1.0
22	1	1.0
23	1	1.0
24	1	1.0
25	1	1.0
26	1	1.0
27	1	1.0
28	1	1.0
29	1	1.0
30	1	1.0
31	1	1.0
32	1	1.0
33	1	1.0
34	1	1.0
35	1	1.0
36	1	1.0
37	1	1.0
38	1	1.0
39	1	1.0
40	1	1.0
41	1	1.0
42	1	1.0
43	1	1.0
44	1	1.0
45	1	1.0
46	1	1.0
47	1	1.0
48	1	1.0
49	1	1.0
50	1	1.0
51	1	1.0
52	1	1.0
53	1	1.0
54	1	1.0
55	1	1.0
56	1	1.0
57	1	1.0
58	1	1.0
59	1	1.0
60	1	1.0
61	1	1.0
62	1	1.0
63	1	1.0
64	1	1.0
65	1	1.0
66	1	1.0
67	1	1.0
68	1	1.0
69	1	1.0
70	1	1.0
71	1	1.0
72	1	1.0
73	1	1.0
74	1	1.0
75	1	1.0
76	1	1.0
77	1	1.0
78	1	1.0
79	1	1.0
80	1	1.0
81	1	1.0
82	1	1.0
83	1	1.0
84	1	1.0
85	1	1.0
86	1	1.0
87	1	1.0
88	1	1.0
89	1	1.0
90	1	1.0
91	1	1.0
92	1	1.0
93	1	1.0
94	1	1.0
95	1	1.0
96	1	1.0
97	1	1.0
98	1	1.0
99	1	1.0
100	1	1.0

[illegible]

DAL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	1	0	0	0	0	1
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	0	1	0	0	0	0	1
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.0	0.0	0.0	0.0	0.10

DAL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	8	0	1	0	0	0	0	0	9
1957	0	0	0	2	1	4	4	9	1	0	0	0	21
1958	0	0	0	8	0	9	0	0	3	1	2	0	23
1959	0	0	0	0	0	4	3	7	0	0	0	0	14
1960	0	0	0	8	0	0	8	0	2	0	0	0	18
1961	0	0	0	1	3	14	5	0	0	0	0	0	23
1962	0	0	0	2	0	3	0	4	0	3	0	0	12
1963	0	0	0	0	1	0	0	0	0	0	0	0	1
1964	0	0	0	12	0	5	3	2	0	0	0	0	22
1965	0	0	1	0	14	0	5	0	0	1	0	0	21
TOTAL MRS	0	0	1	33	27	39	29	22	6	5	2	0	164
AVG MRS	0.0	0.0	0.10	3.30	2.70	3.90	2.90	2.20	0.60	0.50	0.20	0.0	16.40

malu spēkū vā. frezūti: /

FREQUENCY	5	20	443	777	422	212	60	61	29	5	7	5	0
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13
	WIND SPEED (KNOTS)												

STATISTICAL RESULTS

MEAN	2.33 KNOTS
MODE	0.0 KNOTS
MEDIAN	2.00 KNOTS
STC. DEV.	2.60 KNOTS
SKEW	1.17

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	945	1174	2394	3027	3184	3219	3226	3226	3226	3226

CALM	02	02	04	06	08	10	12	14	TOTAL	

	WIND SPEED (KNOTS)									

WIND DIRECTION VS. FREQUENCY

FREQUENCY	965	175	231	456	205	169	217	90	128	62	78	87	139	104	126	91
CALM																
		N	NNE	NNE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
					TRUE WIND DIRECTION											

WIND DIRECTION VS. WIND SPEED

[illegible]

**VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE**

FREQUENCY	18	213	844	231	1107	193	197	0	423
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	14	8	16	4	16	8	16	2	2
	VISIBILITY(MILES)								

MEAN	3.69/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.05/16
SKEN	-0.05

TEMPERATURE VS. FREQUENCY

FREQ	1320	240	160	215	157	111	146	111	112	104	175	57	39	43	30	35	30	14	9	10	11	14	4	2	0	0	0	0	0	
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	13	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	

MEAN 20.50 DEGREES(F)
MODE 13.50 DEGREES(F)
MEDIAN 15.50 DEGREES(F)
STC. DEV. 9.60 DEGREES(F)
SKEW 0.75

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MONTHLY OBSERVATIONS	1092	SPECIAL OBS.	2134	TOTAL OBSERVATIONS	4356	FOG WITH SMOKE AND/OR HAZE	3
1950	12	0	0	12	0	0	0
1951	12	0	0	12	0	0	0
1952	12	0	0	12	0	0	0
1953	12	0	0	12	0	0	0
1954	12	0	0	12	0	0	0
1955	12	0	0	12	0	0	0
1956	12	0	0	12	0	0	0
1957	12	0	0	12	0	0	0
1958	12	0	0	12	0	0	0
1959	12	0	0	12	0	0	0
1960	12	0	0	12	0	0	0
1961	12	0	0	12	0	0	0
1962	12	0	0	12	0	0	0
1963	12	0	0	12	0	0	0
1964	12	0	0	12	0	0	0
1965	12	0	0	12	0	0	0
1966	12	0	0	12	0	0	0
1967	12	0	0	12	0	0	0
1968	12	0	0	12	0	0	0
1969	12	0	0	12	0	0	0
1970	12	0	0	12	0	0	0
1971	12	0	0	12	0	0	0
1972	12	0	0	12	0	0	0
1973	12	0	0	12	0	0	0
1974	12	0	0	12	0	0	0
1975	12	0	0	12	0	0	0
1976	12	0	0	12	0	0	0
1977	12	0	0	12	0	0	0
1978	12	0	0	12	0	0	0
1979	12	0	0	12	0	0	0
1980	12	0	0	12	0	0	0
1981	12	0	0	12	0	0	0
1982	12	0	0	12	0	0	0
1983	12	0	0	12	0	0	0
1984	12	0	0	12	0	0	0
1985	12	0	0	12	0	0	0
1986	12	0	0	12	0	0	0
1987	12	0	0	12	0	0	0
1988	12	0	0	12	0	0	0
1989	12	0	0	12	0	0	0
1990	12	0	0	12	0	0	0
1991	12	0	0	12	0	0	0
1992	12	0	0	12	0	0	0
1993	12	0	0	12	0	0	0
1994	12	0	0	12	0	0	0
1995	12	0	0	12	0	0	0
1996	12	0	0	12	0	0	0
1997	12	0	0	12	0	0	0
1998	12	0	0	12	0	0	0
1999	12	0	0	12	0	0	0
2000	12	0	0	12	0	0	0
2001	12	0	0	12	0	0	0
2002	12	0	0	12	0	0	0
2003	12	0	0	12	0	0	0
2004	12	0	0	12	0	0	0
2005	12	0	0	12	0	0	0
2006	12	0	0	12	0	0	0
2007	12	0	0	12	0	0	0
2008	12	0	0	12	0</		

A3NC

ANC

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

Reproduced from best available copy.

WIND DIRECTION	PERCENTAGE OF WINDS							TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	
N	0.4	2.2	1.2	0.4	0.1	0.0	0.0	4.4
NNE	0.2	2.1	1.9	0.6	0.2	0.0	0.0	5.3
NE	1.0	3.2	1.7	0.5	0.3	0.1	0.0	6.8
ENE	0.4	2.7	1.5	0.2	0.0	0.0	0.0	4.8
E	0.7	3.6	1.9	0.3	0.0	0.0	0.0	6.6
ESE	0.6	3.4	1.7	0.0	0.0	0.0	0.0	5.7
SE	1.0	5.2	1.1	0.0	0.0	0.0	0.0	7.3
SSE	0.1	1.7	1.0	0.0	0.0	0.0	0.0	2.8
S	0.3	2.0	0.8	0.2	0.0	0.0	0.0	4.0
SSW	0.2	1.4	0.4	0.0	0.0	0.0	0.0	2.0
SW	0.1	1.9	0.4	0.1	0.0	0.0	0.0	2.4
WSW	0.3	2.8	0.5	0.0	0.0	0.0	0.0	4.5
W	0.6	4.2	1.1	0.1	0.0	0.0	0.0	6.0
WNW	0.3	1.0	0.7	0.1	0.0	0.0	0.0	2.8
NW	0.7	1.7	0.5	0.1	0.1	0.0	0.0	3.1
NNW	0.4	1.1	0.5	0.2	0.0	0.0	0.0	2.2
CALM								33.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	2525	218	58

TEMPERATURE (F)	28	31	32

CHECK COUNT 2001
FOG WITH LP 29
FOG WITH FP 283
ALL FOG CASES 313
PDUH FOG 279H
REG. OBS. 917

FOG WITH SMOKE AND/OR HAZE 1

ANC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

GOLO FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	3	1	30	21	10	0	0	0	0	65
1957	0	0	0	0	6	33	82	44	0	0	0	0	165
1958	0	0	0	0	8	29	60	9	3	6	0	0	115
1959	0	0	0	3	2	5	1	35	0	1	0	0	47
1960	0	0	0	0	0	6	12	30	4	0	0	0	52
1961	0	0	0	6	16	12	27	5	0	0	0	0	66
1962	0	0	0	1	12	9	40	16	10	0	0	0	108
1963	0	0	0	0	6	13	112	13	0	0	0	0	151
1964	0	0	0	2	0	0	0	0	9	0	0	0	27
1965	0	0	0	0	5	13	4	27	0	0	0	0	100

TOTAL FOG	0.0	0.0	0.0	1.2	11.2	15.7	36.5	2.4	2.6	7	0	0	896
AVG FOG	0.0	0.0	0.0	1.5	11.2	15.7	36.5	2.4	2.6	0.7	0.0	0.0	89.60

ANC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG												
MONTHLY FOG FREQUENCY												
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE TOTAL
1956	C	1	0	0	0	0	0	0	0	0	0	1
1957	C	0	2	0	1	0	6	0	0	0	0	9
1958	4	2	11	0	0	0	0	0	1	3	4	25
1959	0	1	4	3	2	0	0	0	0	0	0	10
1960	1	0	15	6	0	1	0	0	0	0	0	23
1961	0	3	0	4	0	4	11	0	0	7	0	29
1962	C	0	0	1	0	3	0	0	0	0	0	4
1963	C	0	5	0	0	0	47	0	0	0	0	52
1964	0	1	3	0	1	0	0	0	0	0	3	8
1965	C	5	9	0	5	2	0	0	13	0	1	35
TOTAL HRS	5	13	49	14	9	10	64	0	14	10	8	192
AVG HRS	0.50	1.30	4.90	1.40	0.90	1.00	6.40	0.0	1.40	1.00	0.80	19.60

WIND SPEED VS. FREQUENCY

FREQUENCY	344	0	19	152	254	303	159	120	98	38	41	3	4	2	9

CAL4	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

MEAN	4.26 KNOTS
STDEV	0.0 KNOTS
MEAN	5.00 KNOTS
STDEV	2.91 KNOTS
MEAN	1.46

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	344	344	515	1072	1351	1487	1531	1537	1546
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	344	38	23	87	109	124	70	90	50	61	47	86	101	144	76	64	32
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

[illegible]

BAL

VISIBILITY VS. FREQUENCY NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	133	182	337	88	419	13	127	0	247
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	1	3	1	5	3	7	1
16	8	16	4	16	8	16	2		

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.62/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.47/16
SKEW -0.15

TEMPERATURE VS. FREQUENCY

FREQ.	2	0	2	5	3	8	8	19	36	49	82	99	83	100	81	110	62	95	68	67	40	62	70	63	62	51	49	70	57	31	12	
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72		
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72			
	TEMPERATURE (F)																															

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 48.36 °F.
MODE 43.50 °F.
MEDIAN 41.00 °F.
STD. DEV. 12.00 °F.
SKEW 0.19

HOURLY OBSERVATIONS 787 SPECIAL OBS. 750 TOTAL OBSERVATIONS 4211 FOG WITH SMOKE AND/OR HAZE 118

134

BAL

WIND DIRECTION VS. FREQUENCY

FREQUENCY	10	3	9	4	10	8	1	0	2	5	9	4	22	6	12	1
CALM	N	NNE	NNE	ENE	E	ESE	SE	SSE	S	SSE	SE	SSW	W	WNW	NW	NNW
TRUE WIND DIRECTION																

[illegible]

	1	2	3	4	5	6	7	8	9	10	11	12
CALM												
WIND SPEED												

B.L.

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	5.3	2.3	0.0	0.0	0.0	0.0	7.6
NNE	0.0	0.0	0.0	0.0	0.8	0.0	0.0	2.3
NE	0.0	2.3	1.5	3.0	0.0	0.0	0.0	6.8
ENE	0.0	0.0	2.3	0.8	0.0	0.0	0.0	3.0
E	0.0	0.8	3.8	0.0	0.8	2.3	0.0	7.6
ESE	0.0	2.3	0.8	3.0	0.0	0.0	0.0	6.1
SE	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.5
SSW	0.0	0.0	2.3	1.5	0.0	0.0	0.0	3.8
SW	0.0	0.8	3.8	1.5	0.8	0.0	0.0	6.8
WSW	0.0	0.8	1.5	3.0	1.5	0.0	0.0	6.8
W	0.0	4.2	6.8	2.3	3.0	0.0	0.0	16.7
WNW	0.0	2.3	0.8	0.0	1.5	0.0	0.0	4.5
NW	0.0	6.8	2.3	0.0	0.0	0.0	0.0	9.1
NNW	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.8
CALM								15.9
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	32	78	22
TEMPERATURE (F)	28	31	32

CHECK COUNT 132
FOG WITH LP 11
FOG WITH FP 82
ALL FOG CASES 224
PURE FOG 114
REC-UBS. 67

FOG WITH SMOKE AND/OR HAZE 6

BAL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	1	3	0	0	0	0	4
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	3	2	5	0	0	0	0	10
1960	0	0	0	0	0	1	0	1	0	0	0	0	2
1961	0	0	0	0	0	2	0	0	0	0	0	0	2
1962	0	0	0	0	0	3	0	15	0	0	0	0	18
1963	0	0	0	0	0	0	7	0	0	0	0	0	7
1964	0	0	0	0	0	0	4	0	0	0	0	0	4
1965	0	0	0	0	0	0	7	0	0	0	0	0	7
TOTAL HRS	0	0	0	0	0	9	27	24	0	0	0	0	54
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.90	2.10	2.40	0.0	0.0	0.0	0.0	5.40

OBSERVATIONS ARE FOR FOG; POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
 OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
 AND SURFACE VISIBILITY 1.2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	2	10	3	14	46	7	7	15	13	7	1	127
1957	0	0	21	0	8	2	21	11	2	6	4	0	75
1958	1	8	9	8	11	13	1	3	0	4	4	2	64
1959	5	2	4	8	12	14	5	6	6	9	2	0	73
1960	5	1	8	4	8	0	8	0	2	0	0	0	36
1961	4	0	0	6	1	25	2	6	20	0	8	10	84
1962	8	0	0	0	0	0	4	22	0	2	11	0	47
1963	0	0	4	10	8	2	36	0	13	4	3	2	82
1964	1	0	4	1	4	33	11	3	6	13	2	7	85
1965	0	1	12	3	6	16	0	19	2	1	0	0	60

TOTAL HRS 26 14 72 43 72 151 95 79 66 52 41 22 733
 AVG HRS 2.60 1.40 7.20 4.30 7.20 15.10 9.50 7.90 6.60 5.20 4.10 2.20 73.30

IAD

WIND SPEED VS. FREQUENCY

FREQUENCY	232	0	17	182	144	110	43	33	16	4	12	1	2	0	0
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
WIND SPEED (KNOTS)															

STATISTICAL RESULTS

MEAN 3.16 KNOTS
MODE 0.0 KNOTS
MEDIAN 3.00 KNOTS
STD. DEV. 2.49 KNOTS
SKEW 1.27

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	232	232	431	685	761	781	794	796	796
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
WIND SPEED (KNOTS)									

WIND DIRECTION VS. FREQUENCY

FREQUENCY	232	140	46	22	19	16	15	12	27	65	47	26	13	8	21	32	55
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-12	0	3	0	0	0	0	0	0	1	5	4	1	0	0	0	0	1
WIND 7-9	0	11	4	0	0	1	0	0	5	13	8	3	0	1	0	1	6
SPEED 4-6	0	68	31	16	12	7	13	7	13	27	28	16	3	4	16	14	22
KNOTS 1-3	0	>8	11	6	7	8	2	5	8	20	7	6	10	3	5	17	26
CALM	232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE WIND DIRECTION																	
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	

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IAD

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	18	99	150	124	169	20	141	0	75
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	
	VISIBILITY(MILES)								

MEAN	3.76/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.14/16
SKewn	-0.11

FREQ.	TEMPERATURE VS. FREQUENCY																														
	8	0	7	7	9	1	7	0	12	15	47	63	27	33	53	56	75	106	17	7	24	28	8	34	41	15	7	19	31	17	22
<15	15	17	19	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	16	18	20	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	

MEAN	47.14	°F.
MODE	47.50	°F.
MEDIAN	45.50	°F.
STD. DEV.	13.02	°F.
SKEN	-0.03	

FIRST CARD 1- 6-63

TOTAL OBSERVATIONS 2236

FOG WITH SMOKE AND/OR HAZE 18

140

IAD

IAD

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	20	7	5	3	2	0	3	2	0	4	5	2	0	1	3	11
CALM	N	NNE	NNE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNW	NNW

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

IAD

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FLOW WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	
N	0.0	0.1	4.5	0.0	0.0	0.0	0.0	4.6
NNE	0.0	1.5	6.1	0.0	0.0	0.0	0.0	7.6
NE	0.0	0.0	4.5	0.0	0.0	0.0	0.0	4.5
ENE	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	4.5	0.0	0.0	0.0	0.0	4.5
SE	0.0	0.0	3.0	0.0	0.0	0.0	0.0	3.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	3.0	0.0	0.0	0.0	3.0
SW	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.5
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NW	0.0	1.5	0.0	0.0	0.0	0.0	0.0	1.5
NNW	0.0	0.1	4.5	0.1	0.0	0.0	0.0	4.7
CALM								30.3
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	39	21	0
TEMPERATURE (F)			
	28	31	32

CHECK COUNT 60
 FUG WITH LP 14
 FUG WITH FP 26
 ALL FUG CASES 106
 PURE FUG 60
 REC-085 34

FUG WITH SMOKE AND/OR HAZE 0

IAD

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	16	1	0	0	0	0	17
1964	0	0	0	0	0	0	4	1	0	0	0	0	5
1965	0	0	0	0	0	0	4	3	0	0	0	0	7
TOTAL HRS	0	0	0	0	0	0	24	5	0	0	0	0	29
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	2.40	0.50	0.0	0.0	0.0	0.0	2.90

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IAD

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
 IAD OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
 AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	4	2	12	26	4	6	35	2	4	0	0	1	96
1964	5	4	1	1	14	33	6	4	14	16	5	3	106
1965	4	3	21	15	0	22	4	16	3	0	1	1	90
TOTAL HRS	13	9	34	42	18	61	45	22	21	16	6	5	292
AVG HRS	1.30	0.90	3.40	4.20	1.80	6.10	4.50	2.20	2.10	1.60	0.60	0.50	29.70

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CVG

CVC

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	154	100	343	8	429	1	65	0	283
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	3	1	5	3	7	1	
16	8	16	4	16	8	16	2		

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.75/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.61/16
SKEW -0.10

TEMPERATURE VS. FREQUENCY

FREQ.	6	8	2	0	8	10	12	9	46	36	41	89	70	63	80	61	64	38	37	36	86	65	52	47	61	84	91	73	61	36	11
<15	15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	16	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	
																										</					

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 50.11 °F.
MODE 65.50 °F.
MEDIAN 51.50 °F.
STD. DEV. 13.60 °F.
SKEW -1.13

HOURLY OBSERVATIONS	646	SPECIAL OBS.	737	TOTAL OBSERVATIONS	3045	FOG WITH SMOKE AND/OR HAZE	320
							146

CVC

CVG

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE 1-55
THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS						
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT
N	0.0	2.9	4.9	1.5	0.7	0.0	0.0
NNE	0.0	0.0	4.4	2.2	0.7	0.0	0.0
NE	0.0	1.5	2.9	2.2	1.5	0.7	0.0
ENE	0.0	0.0	0.0	1.5	0.0	0.0	0.0
E	0.7	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.7	0.7	0.0	0.0	0.0	0.0
SE	0.0	0.7	0.7	0.0	0.7	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.7	0.7	0.0	0.0	0.7	0.7	0.0
SSW	1.5	2.1	2.9	1.5	2.2	0.7	0.0
SW	0.7	11.7	4.5	1.5	0.7	0.0	0.0
WSW	0.0	2.2	2.2	0.0	0.0	0.0	0.0
W	0.0	2.2	3.6	0.0	0.0	0.0	0.0
WNW	0.0	0.7	2.2	0.7	0.0	0.0	0.0
NW	0.0	0.7	1.5	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.7	0.0	0.0	0.0	0.0
CALM							
TOTAL							100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	52	60	17
TEMPERATURE (F)	28	31	32

CHECK COUNT 137
FOG WITH LP 45
FOG WITH FP 49
ALL FOG CASES 230
PURE FOG 111
REC-035. 69

FOG WITH SMOKE AND/OR HAZE 15

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CVG

CVG

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
--AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	3	0	0	0	0	0	3
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	1	0	0	0	0	0	0	0	0	1
1959	0	0	0	3	0	18	5	0	0	0	0	0	26
1960	0	0	0	1	7	0	-9	1	0	0	0	0	18
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	3	1	0	0	0	0	0	4
1963	0	0	0	0	3	0	3	0	0	0	0	0	6
1964	0	0	0	0	0	1	3	0	0	0	0	0	4
1965	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL HRS	0	0	0	5	10	22	24	1	0	0	0	0	62
AVG HRS	0.0	0.0	0.0	0.50	1.00	2.20	2.40	0.10	0.0	0.0	0.0	0.0	6.20

CVG OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEP	T	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	7	1	1	2	12	23	2	1	5	0	0	0	0	63
1957	6	0	9	5	5	2	0	14	27	7	0	0	4	74
1958	19	15	6	7	7	4	5	3	4	2	3	3	14	85
1959	5	8	0	1	1	3	4	1	8	4	4	1	0	39
1960	8	21	9	13	13	16	0	14	0	0	2	10	13	106
1961	4	6	5	0	0	1	18	0	1	0	0	2	8	45
1962	8	2	5	0	0	7	4	1	0	4	0	8	3	42
1963	0	9	2	0	0	17	0	14	0	12	0	4	3	61
1964	6	4	0	4	4	3	10	0	0	3	1	0	0	31
1965	0	2	1	8	5	2	0	4	1	4	0	1	1	38

TOTAL HRS	63	68	56	47	78	43	52	46	36	10	29	46	584
AVG HRS	6.30	6.80	6.40	4.70	7.80	4.30	5.20	4.60	3.60	1.00	2.90	4.60	58.40

DAY

WIND SPEED VS. FREQUENCY

FREQUENCY	66	0	27	108	125	203	172	127	116	55	53	23	29	4	16
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

STATISTICAL RESULTS

MEAN 5.91 KNOTS
 MODE 5.00 KNOTS
 MEDIAN 6.00 KNOTS
 STD. DEV. 2.87 KNOTS
 SKEW 0.32

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	66	66	201	529	828	999	1075	1108	1124
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	66	106	54	54	35	32	36	106	105	123	85	67	37	35	36	50	98
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

	>12	10-12	7-9	4-6	1-3	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
WIND	0	14	3	0	0	0	4	0	0	0	0	0	0	0	3	2	0	2	1	2	3	3
SPEED	0	38	21	6	3	0	36	26	34	20	5	6	26	42	15	16	16	3	1	1	3	8
KNOTS	0	36	26	34	20	0	36	26	34	20	21	19	50	42	53	32	39	16	11	12	10	5
	0	14	4	10	9	0	14	4	10	9	6	5	14	11	6	11	4	7	10	2	9	13
CALM	66	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRUE WIND DIRECTION																						

DAY

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DAY

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	217	140	252	24	263	4	45	0	179
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	1	3	1	5	3	7	1
16	8	16	4	16	8	16	8	16	2

STATISTICAL RESULTS

MEAN 3.10/16
MODE 4.00/16
MEDIAN 2.00/16
STD. DEV. 2.65/16
SKEW -0.34

TEMPERATURE VS. FREQUENCY

FREQ.	26	13	11	4	12	8	7	31	55	33	57	124	57	40	77	41	32	17	37	24	68	26	21	37	28	57	86	57	18	17	3
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	
16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72			

STATISTICAL RESULTS

MEAN 45.64 °F.
MODE 35.50 °F.
MEDIAN 43.50 °F.
STD. DEV. 14.96 °F.
SKEW 0.68

HOURLY OBSERVATIONS	603	SPECIAL OBS.	521	TOTAL OBSERVATIONS	2675	FOG WITH SMOKE AND/OR HAZE	75
							152

DAY

DAY

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	3	22	0	20	9	12	6	27	31	27	0	4	3	5	6	7	10
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	TRUE WIND DIRECTION																

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WIND SPEED																	
CALM	1	2	3	4	5	6	7	8	9	10	11	12	12	12	12	12	12

DAY

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.5	1.5	2.0	1.5	5.5	11.0
NNE	0.0	0.0	0.5	2.0	1.5	0.0	0.0	4.0
NE	0.0	0.5	1.0	4.0	0.5	0.0	0.0	10.0
ENE	0.0	1.0	1.5	2.0	0.0	0.0	0.0	4.5
E	0.0	1.5	2.5	2.0	0.0	0.0	0.0	6.0
ESE	0.0	1.0	1.5	0.5	0.0	0.0	0.0	3.0
SE	0.0	1.5	1.0	4.5	1.0	0.5	0.0	13.5
SSE	0.0	0.5	1.0	8.5	4.5	0.0	1.0	15.5
S	0.0	0.0	1.0	8.0	2.5	0.0	0.0	13.5
SSW	0.0	0.0	1.0	0.0	0.0	0.0	0.0	2.0
SW	0.0	0.5	1.0	0.5	0.0	0.0	0.0	3.0
WSW	0.0	0.5	0.0	0.5	1.0	0.0	0.0	3.0
W	0.0	0.0	0.0	0.5	2.0	0.0	0.0	2.5
WNW	0.0	0.0	1.5	0.5	0.0	0.0	0.0	3.0
NW	0.0	0.5	1.0	0.5	0.0	0.5	1.0	5.0
NNW	0.0	0.5	1.0	2.0	0.5	1.0	0.0	5.0
CALM								1.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	93	100	1
TEMPERATURE (F)			
	28	31	32

CHECK COUNT 200
FOG WITH LP 42
FOG WITH FP 37
ALL FOG CASES 277
PURE FOG 109
REC-085. 106

FOG WITH SMOKE AND/OR HAZE 11

DAY

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	3	0	0	0	0	0	3
1957	0	0	0	0	0	0	6	7	0	0	0	0	13
1958	0	0	0	0	0	6	2	0	0	0	0	0	8
1959	0	0	0	0	0	2	8	0	1	0	0	0	11
1960	0	0	0	0	4	0	20	3	0	0	0	0	27
1961	0	0	0	0	0	2	0	0	0	0	0	0	2
1962	0	0	0	0	2	4	1	0	0	0	0	0	7
1963	0	0	0	0	0	3	4	4	0	0	0	0	11
1964	0	0	0	0	0	1	13	2	0	0	0	0	16
1965	0	0	0	0	0	0	4	0	0	0	0	0	4

TOTAL HRS	0	0	0	0	6	18	61	16	1	0	0	0	102
AVG HRS	0.0	0.0	0.0	0.0	0.60	1.80	6.10	1.60	0.10	0.0	0.0	0.0	10.20

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

DAY

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	6	0	5	5	26	11	4	7	6	0	1	5	76
1957	5	0	4	0	0	3	7	6	5	3	1	0	34
1958	16	2	0	5	6	8	2	1	0	2	0	7	49
1959	2	2	0	1	0	0	7	4	5	0	6	5	32
1960	0	12	6	7	13	0	28	0	0	0	5	4	75
1961	4	6	0	2	0	12	0	0	0	3	0	5	32
1962	3	3	4	9	1	0	1	0	22	0	3	0	46
1963	4	7	0	6	32	0	2	1	21	0	0	8	81
1964	9	1	6	5	8	5	2	0	2	0	3	0	41
1965	0	0	9	0	1	0	5	1	13	3	3	0	35

TOTAL HRS	49	33	34	40	87	39	58	20	74	11	22	34	501
AVG HRS	4.90	3.30	3.40	4.00	8.70	3.90	5.80	2.00	7.40	1.10	2.20	3.40	50.10

WIND SPEED VS. FREQUENCY

FREQUENCY	183	9	93	192	182	138	114	97	90	36	26	16	10	4	7
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

STATISTICAL RESULTS

MEAN	4.43 KNOTS
MODE	3.00 KNOTS
MEDIAN	4.00 KNOTS
STD. DEV.	2.97 KNOTS
SKEW	0.48

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	183	192	477	797	1008	1134	1176	1190	1197
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	183	50	35	40	41	75	78	98	77	68	50	97	73	63	42	67	60
CALM		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
						TRUE WIND DIRECTION											

WIND DIRECTION VS. WIND SPEED

[illegible]

IND

IND

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	68	125	256	14	384	4	68	0	238
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	3	1	5	3	7	1	
16	8	16	4	16	8	16	2		
	VISIBILITY(MILES)								

STATISTICAL RESULTS

MEAN 3.87/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.50/16
SKEW -0.05

TEMPERATURE VS. FREQUENCY

FREQ.	58	1	0	11	8	8	21	33	54	71	60	108	53	73	23	21	34	43	26	48	34	19	24	25	57	65	88	35	53	37	6
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72	
	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	TO	
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72		
	TEMPERATURE (F)																														

STATISTICAL RESULTS

MEAN 45.82 °F.
MODE 35.50 °F.
MEDIAN 43.50 °F.
STD. DEV. 16.13 °F.
SKEW 0.64

HOURLY OBSERVATIONS	498	SPECIAL OBS.	699	TOTAL OBSERVATIONS	2578	FOG WITH SMOKE AND/OR HAZE	308
							158

IND

IND

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	52	19	8	13	12	18	15	17	13	12	5	4	10	11	26	17
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW
TRUE WIND DIRECTION																

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	0	2	3	1	2	10	0	1	0	0	0	0	0	0	0	0
N	0	2	3	1	2	10	0	1	0	0	0	0	0	0	0	0
NNE	0	0	2	3	0	1	1	1	0	0	0	0	0	0	0	0
NE	0	1	2	4	3	1	2	0	0	0	0	0	0	0	0	0
ENE	0	0	2	1	3	1	2	2	1	0	0	0	0	0	0	0
E	0	0	4	4	4	3	2	1	0	0	0	0	0	0	0	0
ESE	0	0	2	3	3	0	0	0	0	0	0	3	2	0	0	0
SE	0	0	0	1	1	0	1	1	3	2	0	3	1	0	0	0
SSE	0	0	0	2	4	3	2	0	3	2	0	1	0	0	0	0
S	0	0	0	3	1	4	2	2	0	0	0	0	0	1	0	0
SSW	0	0	1	1	1	1	0	1	0	1	2	0	1	0	0	0
SW	0	0	1	2	1	0	0	0	1	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
W	0	0	1	4	4	0	1	0	0	0	0	0	0	0	0	0
WNW	0	0	7	1	1	0	2	0	0	0	0	0	0	0	0	0
NW	0	0	4	6	1	1	3	3	1	0	2	3	0	0	0	0
NNW	0	0	4	2	1	3	2	0	2	1	2	0	0	0	0	0
CALM	52															
WIND SPEED																
CALM	1	2	3	4	5	6	7	8	9	10	11	12	12	12	12	12

IND

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS IN VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	1.5	4.5	0.4	0.0	0.0	0.0	7.2
NNE	0.0	1.9	0.4	0.0	0.0	0.0	0.0	3.0
NE	0.4	2.3	1.5	0.0	0.0	0.0	0.0	4.9
ENE	0.0	1.1	1.5	1.5	0.4	0.0	0.0	4.5
E	0.0	3.0	2.6	1.1	0.0	0.0	0.0	8.8
ESE	0.0	1.9	1.1	0.0	0.0	1.1	0.0	4.9
SE	0.0	0.4	0.4	0.0	2.6	1.1	0.4	5.7
SSE	0.0	0.8	0.4	0.0	1.9	0.4	0.0	6.4
S	0.0	1.1	1.9	1.5	0.0	0.0	0.4	4.9
SSW	0.0	0.0	0.0	0.4	0.4	0.0	1.5	4.5
SW	0.0	1.1	0.0	0.0	0.4	0.0	0.0	1.9
WSW	0.0	0.0	0.0	0.4	0.0	0.0	0.4	1.5
W	0.0	1.9	1.5	0.4	0.0	0.0	0.0	3.8
WNW	0.0	3.0	0.4	0.0	0.0	0.0	0.0	4.2
NW	0.0	3.8	0.0	2.3	0.4	1.9	0.0	9.8
NNW	0.0	2.3	1.5	0.0	1.1	0.0	0.0	6.4
CALM								19.6
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	115	100	42
<hr/>			
	<28 28 TO 31 32		
	TEMPERATURE (F)		

CHECK COUNT 265
 FOG WITH LP 23
 FOG WITH FP 29
 ALL FOG CASES 317
 PURE FOG 175
 RECORDS 115

FOG WITH SMOKE AND/OR HAZE 40

IND

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	7	0	6	0	0	0	13
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	7	0	0	0	0	0	0	7
1959	0	0	0	0	0	10	5	0	1	0	0	0	16
1960	0	0	0	0	9	0	15	0	1	0	0	0	25
1961	0	0	0	0	0	0	0	4	0	0	0	0	4
1962	0	0	0	0	3	2	0	1	0	0	0	0	6
1963	0	0	0	0	5	0	2	0	2	0	0	0	9
1964	0	0	0	0	0	5	1	4	0	0	0	0	10
1965	0	0	0	0	0	0	7	0	0	0	0	0	7
TOTAL HRS	0	0	0	0	17	24	37	9	10	0	0	0	97
AVG HRS	0.0	0.0	0.0	0.0	1.70	2.40	3.70	0.90	1.00	0.0	0.0	0.0	9.70

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
 OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
 AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	5	4	0	5	10	12	2	5	0	0	2	0	43
1957	3	5	5	0	6	8	4	13	2	1	0	0	47
1958	4	8	5	3	12	1	0	3	0	0	1	0	37
1959	8	12	1	0	0	0	4	6	5	0	6	3	45
1960	0	4	1	6	12	0	7	0	0	0	0	0	30
1961	4	10	0	5	6	13	0	2	2	0	0	11	53
1962	2	3	0	7	0	0	0	0	15	0	2	0	29
1963	1	3	1	3	16	0	0	1	11	4	3	5	48
1964	6	8	0	4	0	4	1	0	1	0	0	0	24
1965	0	0	9	0	13	0	12	9	0	0	0	2	45

TOTAL HRS	33	57	212	31	75	38	30	39	36	5	14	21	401
AVG HRS	3.30	5.70	2.20	3.10	7.50	3.80	3.00	3.90	3.60	0.50	1.40	2.10	40.10

WIND SPEED VS. FREQUENCY

FREQUENCY	237	12	63	156	81	55	22	7	4	4	4	1	2	0	0

CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

MEAN	2.36 KNOTS
MODE	0.0 KNOTS
MEDIAN	3.00 KNOTS
STD. DEV.	2.24 KNOTS
SKEW	1.05

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	237	249	468	604	633	641	646	648	648

CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	237	52	27	22	11	15	24	77	62	45	6	14	9	9	4	23	11
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

[illegible]

FDs

SDF

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	40	154	84	54	180	0	31	0	105
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	3	1	5	3	7	1	
16	8	16	4	16	8	16	2		
VISIBILITY(MILES)									

STATISTICAL RESULTS

MEAN 3.44/16
MODE 4.00/16
MEDIAN 3.00/16
STD. DEV. 2.49/16
SKEW -0.22

TEMPERATURE VS. FREQUENCY

FREQ.	5	3	7	0	0	8	12	10	14	23	36	30	17	22	18	23	17	19	12	27	66	35	51	31	23	57	27	12	20	21	2
<15	15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72		
TEMPERATURE (F)																															

STATISTICAL RESULTS

MEAN 49.74 °F.
MODE 53.50 °F.
MEDIAN 53.50 °F.
STD. DEV. 13.76 °F.
SKEW -0.20

HOURLY OBSERVATIONS	304	SPECIAL OBS.	344	TOTAL OBSERVATIONS	1158	FOG WITH SMOKE AND/OR HAZE	207
							164

SDF

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS IN VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

RESULTS ARE FROM OBSERVATIONS IN VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND HIGHER THAN 60 DEGREES (F) AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

SDF

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS						
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT
N	1.2	3.7	0.0	1.2	2.4	1.2	1.2
NNE	0.0	1.2	0.0	0.0	0.0	0.0	0.0
NE	0.0	1.2	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	1.2	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	1.2	2.4	1.2	0.0	0.0	0.0	0.0
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	1.2	0.0	0.0	0.0	0.0	0.0
WSW	0.0	1.2	0.0	0.0	0.0	0.0	0.0
W	0.0	1.2	0.0	0.0	0.0	0.0	0.0
WNW	0.0	2.4	1.2	0.0	0.0	0.0	0.0
NW	0.0	1.2	0.0	0.0	0.0	0.0	0.0
NNW	0.0	1.2	0.0	0.0	0.0	0.0	0.0
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL	11.0	11.0	11.0	11.0	11.0	11.0	11.0

TOTAL

100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 40 7 15

28 28 10 31 32
TEMPERATURE (F)

CHECK COUNT 82
FOG WITH LP 0
FOG WITH FP 12
ALL FOG CASES 94
PURE FOG 22
REC.OBS. 42

FOG WITH SMOKE AND/OR HAZE 30

SDF

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	13	0	0	0	0	0	13
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	5	0	0	0	0	0	0	5
1960	0	0	0	0	5	0	2	0	0	0	0	0	7
1961	0	0	0	0	0	0	1	5	0	0	0	0	6
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	5	0	0	0	0	0	5
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	5	5	21	5	0	0	0	0	36
AVG HRS	0.0	0.0	0.0	0.0	0.50	0.50	2.10	0.50	0.0	0.0	0.0	0.0	3.60

3DF OBSERVATIONS ARE FOR FOG, PUSSIRLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FFB	MAR	APR	MAY	JUNE	TOTAL
1956	6	1	13	10	21	8	0	0	0	0	0	0	59
1957	0	3	0	2	3	5	0	2	6	0	0	0	21
1958	1	7	6	2	4	0	0	0	0	0	0	6	26
1959	0	0	0	2	1	0	0	1	3	3	5	0	15
1960	0	15	6	8	15	0	0	0	0	0	7	8	59
1961	0	1	0	0	0	0	0	0	0	0	0	0	9
1962	3	0	3	5	0	0	0	0	0	0	0	0	11
1963	0	11	2	0	23	0	2	0	3	0	0	0	41
1964	3	1	2	7	0	0	3	0	0	0	0	0	16
1965	0	0	7	2	0	0	2	0	0	0	0	0	11
TOTAL HRS	13	39	39	38	67	13	7	3	12	3	12	27	248
AVG HRS	1.30	3.90	3.90	3.80	6.70	1.30	0.70	0.30	1.50	0.30	1.20	2.20	26.80

JFK

WIND SPEED VS. FREQUENCY

FREQUENCY	36	4	42	153	269	367	288	272	217	154	149	37	62	48	244
WIND SPEED (KNOTS)	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	

STATISTICAL RESULTS

MEAN 7.21 KNOTS
 MGDE 5.00 KNOTS
 MEDIAN 7.00 KNOTS
 STD. DEV. 3.43 KNOTS
 SKEW 0.65

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	36	40	235	871	1431	1802	1988	2098	2342
WIND SPEED (KNOTS)	<2	<4	<6	<8	<10	<12	<14	TOTAL	
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	

WIND DIRECTION VS. FREQUENCY

FREQUENCY	36	91	101	97	138	131	149	178	272	564	210	164	95	34	13	23	46
TRUE WIND DIRECTION	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
CALM	36	91	101	97	138	131	149	178	272	564	210	164	95	34	13	23	46

WIND DIRECTION VS. WIND SPEED

WIND SPEED	>12	10-12	7-9	4-6	1-3	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
WIND SPEED	0	0	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KNOTS	0	0	0	0	0	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

JFK

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	101	168	388	289	658	93	322	0	323
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	3	1	5	3	7	1	
	-	-	-	-	-	-	-	-	-
16	8	16	4	16	8	16	2		
VISIBILITY(MILES)									

STATISTICAL RESULTS

MEAN 4.02/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.22/16
SKEW 0.01

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	1	9	21	68	121	80	108	125	154	156	138	90	137	81	138	88	92	84	111	112	114	115	104	95
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72	
16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72			
TEMPERATURE (F)																															

STATISTICAL RESULTS

MEAN 52.96°F.
MODE 45.50°F.
MEDIAN 51.50°F.
STD. DEV. 11.96°F.
SKEW 0.62

HOURLY OBSERVATIONS 877 SPECIAL OBS. 1465 TOTAL OBSERVATIONS 6585 FOG WITH SMOKE AND/OR HAZE 174
170

JFK

INFLUENCE OF WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS IN VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE A/O/JK HAZE BUT NO PRECIPITATION.

FREQUENCY	1	0	2	7	7	0	1	1	0	1	6	5	4	0	2	0
CALM	N	NINE	NNE	NNW	ESE	SSE	S	SSW	SW	WSW	W	NNW	NNN	NNW	NNN	NNN
	TRUE WIND DIRECTION															

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

WIND RUNS DATA

PERCENTAGE OF WINDS

[illegible]

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	12	19
	28	20	31
	32		
	TEMPERATURE (F)		

CHECK COUNT	31
FUG WITH LP	0
FUG WITH FP	77
ALL FUG CASES	108
PURE FUG	31
REC-0ds.	13

FUG WITH SMOKE AND/UK HAZE 0

JFK

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	1	0	0	0	0	0	1
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	3	0	0	0	0	3
1963	0	0	0	0	0	0	0	2	0	0	0	0	2
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	0	1	5	0	0	0	0	6
- AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.10	0.50	0.0	0.0	0.0	0.0	0.60

JFK

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOG AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	4	3	7	5	6	17	33	1	0	6	0	7	89
1957	0	1	3	0	0	0	21	13	2	13	10	16	79
1958	6	0	2	13	18	0	7	0	0	25	7	6	84
1959	11	1	2	1	0	6	13	19	5	21	5	23	107
1960	0	4	0	5	6	0	1	7	6	7	4	23	63
1961	22	5	6	6	0	6	10	35	6	1	33	13	143
1962	0	8	0	5	5	18	4	25	0	6	1	0	72
1963	0	4	0	13	3	0	9	5	13	2	4	19	72
1964	9	8	0	1	9	35	8	0	19	10	7	3	109
1965	5	3	18	4	3	1	0	16	0	3	0	0	53
TOTAL HRS	57	37	38	53	50	83	106	121	51	94	71	110	871
AVG HRS	5.70	3.70	3.80	5.30	5.00	8.30	10.60	12.10	5.10	9.40	7.10	11.00	87.10

III

175

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VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	260	111	218	84	362	21	106	0	245
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	2

MEAN	3.52/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.69/16
SKEW	-0.18

FRQ.	30	0	2	0	0	11	15	14	19	47	29	51	57	81	88	30	73	52	100	75	43	58	67	85	105	103	62	24	1	0	
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72	
16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72			

MEAN	49.88	° F.
MODE	63.50	° F.
MEDIAN	51.50	° F.
STD. DEV.	12.88	° F.
SKEW	-1.06	

HOURLY OBSERVATIONS	595	SPECIAL OBS.	612	TOTAL OBSERVATIONS	4460	FOG WITH SMOKE AND/OR HAZE	503
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III

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RESULTS ARE FROM OBSERVATIONS IF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

PIT

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
NNE	0.0	0.7	0.7	0.7	0.0	0.0	0.0	2.2
NE	0.0	0.7	0.7	0.0	0.0	0.0	0.0	0.7
NNE	0.0	0.7	1.4	0.0	0.0	0.0	0.0	2.2
E	0.0	0.0	1.4	2.2	1.4	0.0	0.0	0.0
ESE	0.0	0.0	2.2	1.4	1.4	0.0	0.0	2.1
SE	0.0	1.4	0.7	0.7	0.0	0.0	0.0	2.9
SSE	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
S	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7
SSW	0.0	0.0	0.7	0.7	1.4	0.0	0.0	2.9
SW	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.0	0.0	0.0	1.4	0.7	0.0	10.9
WNW	0.0	0.7	0.7	0.7	0.0	0.0	0.0	12.3
NW	0.0	0.7	0.0	0.0	0.0	0.7	0.0	1.4
NNW	0.0	0.7	2.2	0.7	0.0	0.0	0.0	3.6
CALM	0.0	0.0	0.0	1.4	0.7	0.0	0.0	2.2
TOTAL								37.7
								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 62 52 44

28 28 31 32
TEMPERATURE (F)

CHECK COUNT 138
FOG WITH LP 24
FOG WITH FP 155
ALL FOG CASES 314
PURE FOG 70
REC.OBS. 50

FOG WITH SMOKE AND/OR HAZE 3

PIT

REPORTS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	1	0	0	2	0	0	3
1957	0	0	0	0	0	0	0	5	2	0	0	0	7
1958	0	0	0	0	0	2	0	0	0	0	0	0	2
1959	0	0	0	0	0	7	0	0	0	0	0	0	7
1960	0	0	0	0	5	0	0	0	1	0	0	0	6
1961	0	0	0	0	5	0	0	4	0	0	0	0	9
1962	0	0	0	0	0	2	0	0	0	0	0	0	2
1963	0	0	0	0	0	0	4	0	0	0	0	0	4
1964	0	0	0	0	0	0	0	0	0	2	0	0	2
1965	0	0	0	0	0	0	3	0	0	0	0	0	3
TOTAL HRS	0	0	0	0	10	11	8	9	3	4	0	0	45
AVG HRS	0.0	0.0	0.0	0.0	1.00	1.10	0.80	0.90	0.30	0.40	0.0	0.0	4.50

PIT
 OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
 OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
 AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	6	0	7	5	15	6	1	0	0	3	7	8	58
1957	0	4	5	3	7	0	2	11	1	9	1	4	47
1958	13	17	8	27	0	5	2	3	0	0	3	0	78
1959	6	11	4	4	0	0	2	6	0	0	10	0	43
1960	8	6	24	0	4	0	16	0	0	3	8	0	69
1961	9	1	15	0	0	13	0	4	0	0	4	6	52
1962	1	3	13	15	8	2	1	3	0	1	0	6	53
1963	0	10	6	0	6	0	16	0	11	0	10	5	64
1964	7	5	5	0	10	3	0	2	0	6	0	6	44
1965	0	0	12	6	9	0	2	2	8	2	1	0	42
TOTAL HRS	50	57	99	60	59	29	42	31	20	24	44	35	550
AVG HRS	5.00	5.70	9.90	6.00	5.90	2.90	4.20	3.10	2.00	2.40	4.40	3.50	55.00

ORD

WIND SPEED VS. FREQUENCY

FREQUENCY	157	0	22	141	181	195	129	119	96	63	55	27	23	11	19

CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	13	>13

WIND SPEED (KNOTS)															

STATISTICAL RESULTS

MEAN 5.36 KNOTS
MODE 5.00 KNOTS
MEDIAN 5.00 KNOTS
STD. DEV. 3.23 KNOTS
SKEW 0.11

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	157	157	320	696	944	1103	1185	1219	1238

CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	

WIND SPEED (KNOTS)									

WIND DIRECTION VS. FREQUENCY

FREQUENCY	157	89	122	71	45	48	27	33	25	119	78	88	61	77	72	69	56

CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	

TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

>12	0	4	7	0	1	6	0	6	1	1	1	0	0	0	0	0	3
10-12	0	7	21	11	2	8	2	1	2	14	10	21	3	0	0	0	3
WIND 7-9	0	20	43	23	15	15	10	4	6	39	25	26	15	8	10	10	9
SPEED 4-6	0	46	44	28	20	17	13	15	17	56	39	30	23	54	43	29	31
KNOTS 1-3	0	12	7	9	7	2	2	7	0	9	3	11	20	15	19	30	10
CALM	157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	

TRUE WIND DIRECTION																	

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ORD

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	149	99	245	45	383	5	78	0	234
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	
	VISIBILITY(MILES)								

MEAN	3.73/16
MODE	4.00/16
MEDIAN	4.00/16
STD. DEV.	2.58/16
SKEW	-0.10

TEMPERATURE VS. FREQUENCY

FREQ.	55	6	8	10	8	4	6	30	49	39	74	95	73	77	58	41	30	51	81	59	79	62	46	33	18	48	54	17	15	8	0
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72	
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72		
	TEMPERATURE (F)																														

MEAN	44.21	° F.
MODE	35.50	° F.
MEDIAN	43.50	° F.
STD. DEV.	13.74	° F.
SKEW	0.63	

HOURLY OBSERVATIONS	552	SPECIAL OBS.	686	TOTAL OBSERVATIONS	3928	FOG WITH SMOKE AND/OR HAZE	407	182
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WIND DIRECTION VS. FREQUENCY

FREQUENCY	12	21	25	3	4	4	2	4	10	29	15	9	5	20	19	14	14
CALM	N	NNE	NNE	ENE	ENE	E	ESE	E	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	TRUE WIND DIRECTION																

N	0
NNE	0
NE	0
ESE	0
SSE	0
S	0
SSH	0
SW	0
WSW	0
M	0
NNN	0
NW	0
NNW	0
NNNW	0

CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
WIND SPEED													

ORD

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS										TOTAL
	1-2 KT	3-4 KT	5-6 KT	7-8 KT	9-10 KT	11-12 KT	>12 KT				
N	0.0	0.0	0.0	4.2	3.3	1.4	0.0	0.0	9.8		
NNL	0.0	0.0	0.5	4.7	2.3	1.9	2.3	0.0	11.6		
NE	0.0	0.0	0.0	1.9	0.9	0.0	0.0	0.0	3.7		
ENE	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	1.9		
E	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.9		
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
SE	0.0	0.0	1.4	0.5	0.0	0.0	0.0	0.0	1.9		
SSE	0.0	0.0	2.8	0.9	0.5	0.0	0.5	0.5	4.7		
S	0.0	0.0	6.0	3.3	2.3	0.9	0.9	0.5	13.5		
SSW	0.0	0.0	1.9	1.9	0.9	0.9	0.9	0.5	7.0		
SW	0.0	0.0	1.9	0.9	0.5	0.5	0.0	0.0	4.2		
WSW	0.0	0.0	1.4	0.0	0.9	0.0	0.0	0.0	2.3		
W	0.0	0.0	0.5	1.9	0.0	0.0	0.0	0.0	3.3		
WNW	0.0	0.0	5.6	1.4	0.9	0.0	0.0	0.0	8.8		
NW	0.0	0.0	2.3	0.9	0.9	0.0	0.0	0.0	6.5		
NNW	0.0	0.0	3.7	1.4	0.5	0.0	0.0	0.0	6.5		
CALM									5.6		
TOTAL									100.0		

TEMPERATURE VS. FREQUENCY

FREQUENCY	120	67	28

	28	31	32
	TEMPERATURE (F)		

CHECK COUNT 215
 FOG WITH LP 19
 FOG WITH FP 57
 ALL FOG CASES 291
 PURE FOG 113
 REC-ODS. 88

FOG WITH SMOKE AND/OR HAZE 41

ORD

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	2	0	3	0	0	0	0	5
1957	0	0	0	0	0	3	0	0	0	0	0	0	3
1958	0	0	0	0	0	0	15	0	0	0	0	0	15
1959	0	0	0	0	0	0	0	0	4	0	0	0	4
1960	0	0	0	0	0	0	1	0	2	0	0	0	3
1961	0	0	0	0	1	3	0	14	0	2	0	0	20
1962	0	0	0	0	4	0	0	3	0	0	0	0	7
1963	0	0	0	0	0	0	1	12	2	0	0	0	15
1964	0	0	0	0	0	3	1	0	0	0	0	0	4
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	5	11	18	32	8	2	0	0	76
AVG HRS	0.0	0.0	0.0	0.0	0.50	1.10	1.80	3.20	0.80	0.20	0.0	0.0	7.60

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

ORD

WARM FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	8	0	11	24	41	24	0	4	3	5	7	0	127
1957	1	3	2	0	2	0	2	1	0	27	15	4	57
1958	14	12	0	1	6	9	0	6	0	0	0	1	49
1959	3	9	3	0	0	13	7	3	8	2	5	0	53
1960	0	1	3	0	7	0	0	0	10	3	6	0	30
1961	0	10	0	0	7	1	0	2	1	1	0	5	27
1962	0	2	0	5	4	0	4	0	4	3	1	5	28
1963	0	2	1	10	19	0	0	0	12	4	3	0	51
1964	5	0	0	2	0	12	2	0	4	3	0	4	32
1965	0	0	0	0	13	2	0	4	0	3	0	0	22
TOTAL HRS	31	39	20	42	99	61	15	20	42	51	37	19	476
AVG HRS	3.10	3.90	2.00	4.20	9.90	6.10	1.50	2.00	4.20	5.10	3.70	1.90	47.60

WIND SPEED VS. FREQUENCY

FREQUENCY	200	3	11	191	215	173	126	84	64	16	20	9	16	6	11

CALM	1	2	3	4	5	6	7	3	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

STATISTICAL RESULTS

MEAN	4.10 KNOTS
MODE	0.0 KNOTS
MEDIAN	4.00 KNOTS
STD. DEV.	3.05 KNOTS
SKEN	1.34

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	<86	≥89	491	879	1089	1169	1198	1220	1231
	<hr/>								
CALM %	%	%	%	%	%	%	%	%	TOTAL
	<hr/>								
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	280	50	71	60	37	43	41	55	46	62	112	123	82	53	45	46	19
CALM					ENE	E	ESE	SE	SSE	S	SSW	SW	WSH	M	WNW	NW	NNW
						TRUE WIND DIRECTION											

WIND DIRECTION VS. WIND SPEED

[illegible]

DTW

DTW

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	168	173	324	32	311	1	59	0	163
POSITION	0	1	2	3	4	5	6	7	8
0	1	1	3	1	5	3	7	1	1
-	-	-	-	-	-	-	-	-	-
16	8	16	4	16	8	16	2		

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.11/16
MODE 2.00/16
MEDIAN 2.00/16
STD. DEV. 2.40/16
SKEW 0.40

TEMPERATURE VS. FREQUENCY

FREQ.	25	4	7	18	30	27	16	9	30	30	113	101	73	52	61	30	59	63	32	26	14	14	25	69	61	77	76	36	18	8	6
<1>	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72	
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
															</																

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 40.57 DEGREES(F)
MODE 33.50 DEGREES(F)
MEDIAN 43.50 DEGREES(F)
STD. DEV. 14.72 DEGREES(F)
SKEW 0.78

HOURLY OBSERVATIONS 500 SPECIAL OBS. 671 TOTAL OBSERVATIONS 2266 FOG WITH SMOKE AND/OR HAZE 568
FIRST CARD 8- 7-58 188

DTW

DTW

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

CGLD FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	1	0	3	5	22	0	0	0	0	0	0	31
1959	0	0	0	0	0	1	5	0	3	0	0	0	9
1960	0	0	0	0	1	0	8	3	0	0	0	0	12
1961	0	0	0	0	0	3	3	2	0	0	0	0	8
1962	0	0	0	0	7	17	2	2	0	0	0	0	28
1963	0	0	0	1	0	0	1	0	0	0	0	0	2
1964	0	0	0	0	0	0	0	0	5	0	0	0	5
1965	0	0	0	0	0	0	0	5	0	0	0	0	5
TOTAL HRS	0	1	0	4	13	43	19	12	8	0	0	0	100
AVG HRS	0.0	0.10	0.0	0.40	1.30	4.30	1.90	1.20	0.80	0.0	0.0	0.0	10.00

DTW

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	1	0	0	0	0	0	0	1
1959	1	8	0	5	2	13	7	6	3	6	0	0	51
1960	6	6	21	11	17	0	18	0	0	4	0	0	77
1961	5	10	12	11	0	14	0	14	6	0	3	3	78
1962	4	5	5	7	0	2	0	10	4	0	0	0	37
1963	0	6	0	11	13	0	0	0	16	4	0	10	60
1964	3	11	12	4	10	7	11	0	12	0	3	9	82
1965	0	23	4	5	5	2	5	12	6	1	7	5	75

TOTAL HRS	13	69	54	54	47	39	41	42	47	15	13	27	461
AVG HRS	1.30	6.90	5.40	5.40	4.70	3.90	4.10	4.20	4.70	1.50	1.30	2.70	46.10

715

WIND SPEED VS. FREQUENCY

FREQUENCY	103	2	17	101	99	86	43	53	53	24	28	9	8	4	7

CALM	1	2	3	4	5	6	7	8	'9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

STATISTICAL RESULTS

MEAN	4.80 KNOTS
MODE	0.0 KNOTS
MEDIAN	4.00 KNOTS
STD. DEV.	3.22 KNOTS
SKEW	1.49

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	103	105	223	408	504	581	618	630	637

CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	103	13	18	30	20	26	70	45	45	39	16	26	25	51	49	42	18
CAL:	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

[illegible]

NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

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MEAN      4.06/16
MODE      4.00/16
MEDIAN    4.00/16
STD. DEV. 2.56/16
SKEW      0.02

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TEMPERATURE VS. FREQUENCY

FREQ.	2	0	2	0	2	0	6	13	12	60	35	43	26	47	30	33	42	34	56	25	12	23	9	7	28	7	18	14	17	20	15	0
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	72		
15	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
15	19	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72				

STATISTICAL RESULTS

MEAN	44.33°F.
MODE	29.50°F.
MEDIAN	43.50°F.
STD. DEV.	12.76°F.
SKEW	1.16

HOURLY OBSERVATIONS	267	SPECIAL OBS.	370	TOTAL OBSERVATIONS	1549	FOG WITH SMOKE, AND/OR HAZE	219
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WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	14	0	2	12	8	9	23	14	13	8	0	4	9	4	6	4	1
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	TRUE WIND DIRECTION																

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	0	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	1	0	0	0	0	0	1	0	0	0	0	0	0
NE	0	0	0	4	3	2	0	0	3	0	0	0	0	0
ENE	0	0	0	2	4	2	0	0	0	0	0	0	0	0
E	0	0	1	0	3	2	0	2	1	0	0	0	0	0
ESE	0	0	0	5	8	6	3	0	1	0	0	0	0	0
SE	0	0	2	2	3	3	0	1	2	1	0	0	0	0
SSE	0	0	0	1	0	1	1	2	3	0	3	0	1	1
S	0	0	0	5	0	1	0	1	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Sw	0	0	0	1	1	0	1	0	1	0	0	0	0	0
WSW	0	0	0	0	0	4	2	2	1	0	0	0	0	0
W	0	0	0	0	0	1	0	2	1	0	0	0	0	0
WNW	0	0	1	0	2	2	0	0	1	0	0	0	0	0
NW	0	0	0	1	1	0	0	1	0	0	1	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	1
CALM	14													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

ITS

STL

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS						
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.8	0.0	0.0	0.8	0.0	0.0	0.0
NE	0.0	3.1	3.8	2.3	0.0	0.0	0.0
ENE	0.0	1.5	4.6	0.0	0.0	0.0	0.0
E	0.8	2.3	1.5	2.3	0.0	0.0	0.0
ESE	0.0	3.8	10.7	2.3	0.8	0.0	0.0
SE	0.0	3.1	4.6	0.8	2.3	0.0	0.0
SSE	0.0	0.0	0.8	2.3	2.3	2.3	1.5
S	0.0	3.0	0.8	0.8	0.0	0.0	0.8
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	0.8	0.8	0.0	0.8	0.0	0.0
WSW	0.0	0.0	3.1	3.1	0.8	0.0	0.0
W	0.0	0.0	0.8	1.5	0.8	0.0	0.0
WNW	0.0	0.8	3.1	0.0	0.8	0.0	0.0
NW	0.0	0.8	0.8	0.8	0.0	0.8	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.8
CALM	0.0	0.0	0.0	0.0	0.0	0.0	10.7
TOTAL							100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	34	86	11
TEMPERATURE (F)	28	28 TO 31	32

CHECK COUNT 131
 FOG WITH LP 20
 FOG WITH FP 37
 ALL FOG CASES 187
 PURE FOG 84
 REG.OBS. 61

FOG WITH SMOKE AND/OR HAZE 23

STL

195

STL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	5	0	0	0	0	0	0	5
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	3	0	0	0	0	0	0	3
1959	0	0	0	0	0	0	2	0	0	0	0	0	2
1960	0	0	0	0	0	0	11	7	2	0	0	0	20
1961	0	0	0	0	0	0	0	2	0	0	0	0	2
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	16	0	0	0	0	0	16
1964	0	0	0	0	0	5	0	0	0	0	0	0	5
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	0	13	29	9	2	0	0	0	53
AVG HRS	0.0	0.0	0.0	0.0	0.0	1.30	2.90	0.90	0.20	0.0	0.0	0.0	5.30

196

STL

STL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPES, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	5	2	0	6	6	14	9	8	0	5	0	0	46
1957	0	2	0	0	1	12	10	20	0	0	0	0	45
1958	2	3	0	0	0	2	0	0	1	1	0	0	9
1959	0	0	0	0	0	1	8	2	0	0	1	2	14
1960	0	0	3	7	0	0	11	1	0	0	0	0	22
1961	0	2	1	6	2	1	0	0	0	0	3	1	16
1962	2	0	1	2	0	2	8	0	5	0	0	0	20
1963	0	0	4	0	15	0	0	0	1	0	0	0	20
1964	0	0	0	0	0	3	0	0	6	4	3	0	16
1965	0	0	2	1	0	0	0	1	0	2	0	0	6
TOTAL HRS	9	9	11	22	24	35	37	32	13	12	7	3	214
AVG HRS	0.90	0.50	1.10	2.20	2.40	3.50	3.70	3.20	1.30	1.20	0.70	0.30	21.40

WIND SPEED VS. FREQUENCY

FREQUENCY	WIND SPEED (KNOTS)														
	75	1	14	63	85	110	114	90	104	66	79	46	52	24	48
CAL:	1	2	3	4	5	6	7	8	9	10	11	12	13	13	>13

MEAN	6.95 KNOTS
MODE	6.00 KNOTS
MEDIAN	7.00 KNOTS
STD. DEV.	3.62 KNOTS
SKEN	0.26

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	75	76	153	348	552	722	847	923	971
CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

SWIMMING DIRECTION VS. FREQUENCY

FREQUENCY	75	48	130	295	130	63	18	16	39	62	25	35	8	0	5	12	10
	CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	S ^W	WSW	W	WNW	NW	NNW
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

[illegible]

LG VISIBILITY VS. FREQUENCY
NOTE: 7/10 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	36	126	164	93	197	53	160	0	142
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	16	8	16	4	16	8	16	2	

STATISTICAL RESULTS

MEAN 4.00/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.36/16
SKEW -0.00

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	0	0	0	21	63	62	74	37	33	96	56	59	41	75	45	38	44	35	49	29	23	56	22	4	4
	<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	72	
	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	72	
	15	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72		

STATISTICAL RESULTS

MEAN 48.96 °F.
MODE 43.50 °F.
MEDIAN 47.50 °F.
STD. DEV. 10.91 °F.
SKEW 0.50

TOTAL OBSERVATIONS 374 SPECIAL OBS. 597 TOTAL OBSERVATIONS 3624 FOG WITH SMOKE AND/OR HAZE 117

WIND DIRECTION VS. FREQUENCY

[illegible]

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F: AND) FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible]

	1	2	3	4	5	6	7	8	9	10	11	12 >12
CALM												
WIND SPEED												

LGA

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS									
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL		
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NNE	0.0	0.0	4.8	19.0	0.0	0.0	0.0	0.0	23.8	
NE	0.0	0.0	9.5	9.5	9.5	14.3	23.8	66.7	0.0	
ENE	0.0	0.0	4.8	0.0	0.0	4.8	0.0	9.5	0.0	
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
S	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
WNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
TOTAL								100.0		

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	2	19
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<28	28 TO 31	32
TEMPERATURE (F)		

CHECK COUNT 21
 FOG WITH LP 15
 FOG WITH FP 76
 ALL FOG CASES 112
 PURE FOG 21
 -REC.OBS. 9

FOG WITH SMOKE AND/OR HAZE	0
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201

LGA

LGA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	2	0	0	0	2
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL HRS	0	0	0	0	0	0	0	0	2	0	0	0	2
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.20	0.0	0.0	0.0	0.20

LGA

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	2	10	14	0	0	12	0	1	39
1957	1	1	0	0	0	0	4	3	0	3	1	5	18
1958	2	0	0	12	4	6	4	0	0	16	3	5	46
1959	1	0	0	0	0	4	6	17	12	6	5	9	60
1960	0	0	0	0	1	9	0	0	1	2	0	5	9
1961	7	0	5	0	0	3	17	11	2	0	23	0	73
1962	0	0	0	6	0	16	2	21	3	3	0	0	51
1963	0	0	0	0	1	0	8	0	6	0	2	3	20
1964	7	0	0	1	10	16	0	0	2	0	4	4	44
1965	0	0	0	1	3	0	0	8	0	0	0	0	12
TOTAL HRS	18	1	5	20	21	49	55	60	26	42	43	32	372
AVG HRS	1.80	0.10	0.50	2.00	2.10	4.90	5.50	6.00	2.60	4.20	4.30	3.20	37.20

FREQUENCY	20	0	33	75	119	133	137	69	60	51	56	24	32	25	61

CAL.	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

MEAN	6.74 KNOTS
MODE	6.00 KNOTS
MEDIAN	6.00 KNOTS
STD. DEV.	3.43 KNOTS
SKEW	0.21

CONSULTATIVE										
FREQUENCY										
26	26	134	386	612	723	803	860	921		

CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	WIND SPEED (KNOTS)	

FREQUENCY		26	39	58	95	32	23	18	19	16	82	140	215	87	12	11	18	30	
CALM		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WSW	NW	NNW		
		TRUE WIND DIRECTION																	

[illegible]

BUF VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	27	112	221	66	253	20	73	0	149
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
		-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.79/15
MODE 4.00/15
MEDIAN 4.00/15
STD. DEV. 2.34/15
SKEW -0.09

TEMPERATURE VS. FREQUENCY

FREQ.	11	0	18	7	2	3	4	6	25	73	64	72	45	30	37	24	41	40	51	52	43	48	64	59	27	38	1	0	0	0
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	15	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 45.58 °F.
MODE 31.50 °F.
MEDIAN 47.50 °F.
STD. DEV. 12.65 °F.
SKEW 1.11

HOURLY OBSERVATIONS 423 SPECIAL OBS. 498 TOTAL OBSERVATIONS 3130 FOG WITH SMOKE AND/OR HAZE 261

BUF

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	6	11	15	22	6	3	1	1	0	9	24	32	4	3	3	0	-4
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
TRUE WIND DIRECTION																	

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	3	2	2	1	0	0	1	1	0	0	0	1
NNE	0	0	0	1	1	2	2	5	0	0	1	1	1	1	0	2
NE	0	0	2	0	4	3	4	1	3	4	1	0	0	0	0	0
ENE	0	0	0	1	3	0	1	0	0	1	0	0	0	0	0	0
E	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
SE	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	3	1	5	0	0	0	0	0	0	0	0	0
SSW	0	0	1	2	5	1	0	3	1	0	0	0	0	1	0	0
SW	0	0	1	0	3	4	12	6	4	1	1	0	0	0	0	0
WSW	0	0	1	1	1	0	0	0	0	1	1	2	0	0	2	0
W	0	0	0	1	0	0	0	0	1	0	1	0	0	0	0	0
WNW	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	2	0	0	1	0	0	0	0	0	0	1	0
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12
WIND SPEED													

BUF

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS								TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT		
N	0.0	2.0	2.7	0.7	0.7	0.7	0.7	7.4	
NNE	0.0	0.7	2.0	4.0	0.7	1.3	1.3	10.1	
NE	0.0	1.3	4.7	3.4	4.7	0.7	0.0	14.8	
ENE	0.0	0.7	2.0	0.7	0.7	0.0	0.0	4.0	
E	0.0	0.7	1.3	0.0	0.0	0.0	0.0	2.0	
ESE	0.0	0.0	0.7	0.0	0.0	0.0	0.7	0.7	
SE	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.7	
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
S	0.0	0.0	2.7	3.4	0.0	0.0	0.0	6.0	
SSW	0.0	2.0	10.7	2.0	0.7	0.0	0.7	16.1	
SW	0.0	0.7	4.7	12.1	3.4	0.7	0.0	21.5	
WSW	0.0	1.3	0.7	0.0	0.7	2.0	1.3	6.0	
W	0.0	0.7	0.0	0.0	0.7	0.7	0.0	2.0	
WNW	0.0	0.7	0.0	0.7	0.7	0.0	0.0	2.0	
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
NNW	0.0	1.3	0.0	0.7	0.0	0.0	0.7	2.7	
CALM								4.0	
TOTAL								100.0	

TEMPERATURE VS. FREQUENCY

FREQUENCY	45	57	47
TEMPERATURE (F)	28	31	32

CHECK COUNT 149
 FOG WITH LP 27
 FOG WITH FP 78
 ALL FOG CASES 251
 PURE FOG 130
 REC.OBS. 83

FOG WITH SMOKE AND/OR HAZE 13

BUF

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

CULD FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	2	0	0	0	2
1958	0	0	0	0	0	1	0	1	0	1	0	0	3
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	2	0	12	0	0	3	0	0	17
1961	0	0	0	0	1	1	0	17	0	2	0	0	21
1962	0	0	0	0	0	1	1	0	4	6	0	0	12
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	1	0	0	1	0	0	0	2
1965	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL HRS	0	0	0	0	3	4	13	18	7	12	0	0	57
AVG HRS	0.0	0.0	0.0	0.0	0.30	0.40	1.30	1.80	0.70	1.20	0.0	0.0	5.70

BUF

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	3	3	0	11	3	1	3	4	0	3	13	46
1957	9	4	0	5	7	0	0	0	13	7	14	0	59
1958	2	0	0	0	0	6	3	0	0	1	3	0	15
1959	4	0	0	0	1	9	0	0	0	0	8	0	22
1960	0	1	0	0	3	0	2	0	3	5	22	2	38
1961	6	2	0	3	0	2	0	3	3	9	3	19	52
1962	0	3	0	0	0	3	0	0	0	13	4	6	29
1963	1	2	4	0	0	0	0	0	19	0	7	3	32
1964	0	7	0	0	3	3	0	1	4	4	7	1	30
1965	3	1	0	0	5	0	0	1	4	23	1	5	43
TOTAL FRS	29	23	7	8	30	26	6	8	50	62	68	49	366
AVG FRS	2.90	2.30	0.70	0.80	3.00	2.60	0.60	0.80	5.00	6.20	6.80	4.90	36.60

FREQUENCY	47	40	120	91	199	211	142	117	92	29	20	9	2	0	0

CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

MEAN	4.32 KNOTS
MODE	5.00 KNOTS
MEDIAN	5.00 KNOTS
STD. DEV.	2.37 KNOTS
SKW	-0.07

CUMULATIVE FREQUENCY	47	87	298	708	973	1094	1123	1126	1126

C-14	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

47	27	84	121	50	96	73	33	03	97	130	159	73	37	12	10	14
FREQUENCY																

CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
TRUE WIND DIRECTION																

[illegible]

EWR

NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	160	86	189	55	268	17	177	0	168
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	15	8	16	2	2

STATISTICAL RESULTS

MEAN	3.72/16
MODE	4.30/16
MEDIAN	4.00/16
STD. DEV.	2.59/16
SKEW	-0.11

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	6	0	16	16	52	43	95	101	104	84	92	43	23	52	51	60	44	37	36	68	21	31	16	11	19
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75
TEMPERATURE (F)	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	73	75

STATISTICAL RESULTS

MEAN	48.16	°F.
MODE	41.50	°F.
MEDIAN	45.50	°F.
STD. DEV.	11.04	°F.
SKEW	0.60	

REGULAR OBSERVATIONS	430	SPECIAL OBS.	696	TOTAL OBSERVATIONS	3544	FOG WITH SMOKE AND/OR HAZE	1017
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WIND DIRECTION VS. FREQUENCY

FREQUENCY	2	1	4	8	0	0	0	0	0	0	6	10	3	0	2	2	0	0
CALM																		
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		
	TRUE WIND DIRECTION																	

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	0	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	0	0	0	0	0	1	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	1	2	0	0
NE	0	0	0	0	0	1	1	0	0	3	1	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	2	1	2	1	0	0	0	0	0	0
SSW	0	0	1	3	2	4	0	0	0	0	0	0	0	0
SW	0	0	1	0	1	0	0	1	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	1	0	0	0	1	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	2	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	2													
	CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12

WWR

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS								TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT		
N	0.0	0.0	0.0	0.0	2.6	0.0	0.0	0.0	2.6
NNE	0.0	0.0	0.0	2.6	2.6	5.3	0.0	0.0	10.5
NE	0.0	0.0	2.6	2.6	10.5	5.3	0.0	0.0	21.1
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0
S	0.0	5.3	7.9	2.6	0.0	0.0	0.0	0.0	15.8
SSW	0.0	10.5	15.8	0.0	0.0	0.0	0.0	0.0	26.3
SW	0.0	2.6	2.6	2.6	0.0	0.0	0.0	0.0	7.9
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	2.6
WNW	0.0	0.0	0.0	5.3	0.0	0.0	0.0	0.0	5.3
NW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTAL									100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	6	22	10
TEMPERATURE (F)	28	28 TO 31	32

CHECK COUNT 38
 FOG WITH LP 9
 FOG WITH FP 85
 ALL FOG CASES 132
 PURE FOG 0
 REC.OBS. 13

FOG WITH SMOKE AND/OR HAZE 13

FOR

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	4	0	0	0	0	4
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	3	0	0	0	0	0	3
1964	0	0	0	0	0	1	0	0	0	0	0	0	1
1965	0	0	0	0	0	0	1	0	0	0	0	0	1

TOTAL HRS	0	0	0	0	0	1	4	4	0	0	0	0	9
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.10	0.40	0.40	0.0	0.0	0.0	0.0	0.90

EXR

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	4	1	5	18	20	1	0	10	1	3	63
1957	0	0	3	0	0	0	18	2	0	5	7	4	39
1958	0	0	0	14	6	0	3	0	0	4	4	3	34
1959	2	1	0	0	0	0	5	6	5	16	0	12	47
1960	0	2	4	5	3	0	0	0	0	2	0	1	17
1961	0	0	0	7	0	2	13	12	2	0	12	1	49
1962	0	0	1	11	0	17	0	22	0	1	0	0	52
1963	0	0	0	6	0	0	14	0	9	0	0	2	31
1964	1	0	0	2	14	32	4	0	7	2	2	4	68
1965	0	0	0	6	5	0	0	10	0	0	0	0	21

TOTAL HRS	3	3	12	52	33	69	77	53	23	40	26	30	421
AVG HRS	0.30	0.30	1.20	5.20	3.30	6.90	7.70	5.30	2.30	4.00	2.60	3.00	42.10

WIND SPEED VS. FREQUENCY

FREQUENCY	35	13	43	125	151	185	227	202	164	93	92	47	32	20	28

CALC	1	2	3	4	5	6	7	8	9	10	11	12	13	>13	
	WIND SPEED (KNOTS)														

STATISTICAL RESULTS

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MEAN 6.45 KNOTS
MODE 6.00 KNOTS
MEDIAN 6.00 KNOTS
STD. DEV. 2.89 KNOTS
SKEW 0.15

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WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	36	49	217	553	982	1239	1378	1430	1458

CALM	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

30	52	71	82	156	270	183	120	72	94	04	43	12	51	45	42	55

CALM N ANE NE ENE E ESP SF SSE S SSW SW W WNW NW NNW																
TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

[illegible]

BOS VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	33	168	290	13	513	2	143	0	296
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
		-	-	-	-	-	-	-	-
	16	0	16	4	16	8	16	2	

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 4.17/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.41/16
SKEW 0.07

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	0	7	10	42	41	84	68	87	47	54	80	59	63	88	81	91	103	96	126	87	94	42	18	0	0
	12	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	
																													</	

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 51.09 °F.
MODE 51.50 °F.
MEDIAN 51.50 °F.
STD. DEV. 10.78 °F.
SKEW -0.39

HOURLY OBSERVATIONS 519 SPECIAL OBS. 939 TOTAL OBSERVATIONS 3066 FOG WITH SMOKE AND/OR HAZE 278

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	3	5	3	4	4	1	0	1	0	1	4	10	0	5	9	6	3
	CALM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNW	NNW
	TRUE WIND DIRECTION																

-RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

[illegible][illegible]

BOS

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS										TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL			
N	0.0	0.0	1.7	1.7	5.1	0.0	0.0	0.0	8.5		
NNE	0.0	0.0	3.4	0.0	0.0	0.0	0.0	1.7	5.1		
NE	0.0	1.7	3.4	0.0	1.7	0.0	0.0	0.0	6.8		
ENE	0.0	0.0	6.8	0.0	0.0	0.0	0.0	0.0	6.8		
E	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	1.7		
ESE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
S	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	1.7		
SSW	0.0	3.4	0.0	1.7	1.7	0.0	0.0	0.0	6.8		
SW	0.0	1.7	0.0	0.0	5.1	5.1	5.1	5.1	16.9		
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
W	0.0	0.0	0.0	0.0	8.5	0.0	0.0	0.0	8.5		
WNW	0.0	3.4	1.7	1.7	6.8	1.7	0.0	0.0	15.3		
NW	0.0	0.0	0.0	5.1	5.1	0.0	0.0	0.0	10.2		
NNW	0.0	0.0	1.7	1.7	1.7	0.0	0.0	0.0	5.1		
CALM									5.1		
TOTAL									100.0		

TEMPERATURE VS. FREQUENCY

FREQUENCY	0	51	8

	<28 28 TO 31 32		
	TEMPERATURE (F)		

CHECK COUNT 59
 FOG WITH LP 22
 FOG WITH FP 37
 ALL FOG CASES 118
 PURE FOG 34
 REC.OBS. 20

FOG WITH SMOKE AND/OR HAZE 5

BOS

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	1	2	0	0	0	0	0	3
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	3	5	0	0	0	8
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	4	0	0	0	0	0	4
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL HRS	0	0	0	0	0	1	6	3	5	0	0	0	15
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.10	0.60	0.30	0.50	0.0	0.0	0.0	1.50

BOS

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	11	4	18	2	14	5	0	0	1	1	2	60
1957	0	0	8	7	2	0	0	0	0	1	3	2	23
1958	11	0	0	9	1	0	5	0	0	9	0	5	40
1959	3	10	6	6	10	0	7	1	0	6	16	1	66
1960	8	3	4	9	10	0	0	9	1	4	20	8	78
1961	8	14	14	7	0	2	2	30	0	0	11	12	100
1962	3	4	5	0	0	9	1	5	0	3	8	0	38
1963	6	7	10	0	0	2	0	0	4	0	0	1	30
1964	2	2	4	3	10	13	7	0	2	12	4	0	53
1965	0	3	2	0	1	0	2	3	0	1	0	0	12
TOTAL HRS	43	54	57	59	36	40	29	48	7	37	63	31	504
AVG HRS	4.30	5.40	5.70	5.90	3.60	4.00	2.90	4.80	0.70	3.70	6.30	3.10	50.40

BDL

STATISTICAL RESULTS

MEAN	3.34 KNOTS
MODE	0.0 KNOTS
MEDIAN	3.00 KNOTS
STD. DEV.	2.74 KNOTS
SKEW	1.22

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CONJUNCTIVE FREQUENCY	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963
CALM	2	4	6	8	10	12	14	TOTAL				
	WIND SPEED (KNOTS)											

WIND DIRECTION VS. FREQUENCY

FREQUENCY	452	262	74	81	20	21	24	66	105	351	81	102	59	63	42	84	76
CALM	N	NNE	NNE	NNE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNN
TRUE WIND DIRECTION																	

WIND DIRECTION VS. WIND SPEED

[illegible]

BDL VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	246	220	393	99	512	2	181	0	310
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	16	4	16	8	16	2	

STATISTICAL RESULTS

MEAN 3.53/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.50/16
SKEW -0.18

TEMPERATURE VS. FREQUENCY

FREQ.	0	0	0	0	0	4	15	54	37	69	113	67	118	72	54	72	64	84	63	85	102	70	106	94	67	136	126	127	67	62	28	7
<15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72		
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	12	
	15	15	20	21	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72			

STATISTICAL RESULTS

MEAN 49.31 OF.
MODE 61.50 OF.
MEDIAN 51.50 OF.
STD. DEV. 13.35 OF.
SKEW -0.91

WINDSPEED OBSERVATIONS 3 896 SPECIAL OBS. 1077 TOTAL OBSERVATIONS 4402 FOG WITH SMOKE AND/OR HAZE 2

BUL

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	91	65	14	12	1	4	6	8	9	22	6	8	14	11	3	9	- 9
CALM	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	8	14	9	17	10	3	1	2	1	0	0	0	0	0
NNE	0	0	5	5	1	1	1	0	2	0	0	0	0	0	0	0	0
NE	0	0	2	6	2	2	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	2	1	3	2	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	3	2	1	2	0	1	0	0	0	0	0	0	0	0	0
S	0	0	5	9	2	4	1	1	0	0	0	0	0	0	0	0	0
SSW	0	0	1	3	0	1	0	1	0	0	0	0	0	0	0	0	0
SW	0	0	4	0	2	0	1	0	1	0	0	0	0	0	0	0	0
WSW	0	0	6	7	0	1	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	3	5	2	1	0	0	0	0	0	0	0	0	0	0
WNW	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	3	4	1	0	1	0	0	0	0	0	0	0	0	0	0
NNW	0	0	2	4	1	1	0	0	0	0	0	0	0	0	0	0	0
CALM	91																
CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12				

BDL

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	
N	0.0	7.5	8.9	4.5	1.0	0.3	0.0	22.3
NNE	0.0	3.4	0.7	0.7	0.0	0.0	0.0	4.8
NE	0.0	2.7	1.4	0.0	0.0	0.0	0.0	4.1
ENE	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.3
E	0.0	0.7	0.7	0.0	0.0	0.0	0.0	1.4
ESE	0.0	0.3	1.7	0.0	0.0	0.0	0.0	2.1
SE	0.0	1.0	1.7	0.0	0.0	0.0	0.0	2.7
SSE	0.0	1.7	1.0	0.3	0.0	0.0	0.0	3.1
S	0.0	4.8	2.1	0.7	0.0	0.0	0.0	7.5
SSW	0.0	1.4	0.3	0.3	0.0	0.0	0.0	2.1
SW	0.0	1.4	0.7	0.3	0.3	0.0	0.0	2.7
WSW	0.0	4.5	0.3	0.0	0.0	0.0	0.0	4.8
W	0.0	1.0	2.4	0.3	0.0	0.0	0.0	3.8
WNW	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
NW	0.0	2.4	0.3	0.3	0.0	0.0	0.0	3.1
NNW	0.0	2.1	0.7	0.0	0.0	0.3	0.0	3.1
CALM								31.2
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	92	144	56
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TEMPERATURE (F)	<28	28 TO 31	32
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CHECK COUNT 292
 FOG WITH LP 40
 FOG WITH FP 90
 ALL FOG CASES 419
 PURE FOG 292
 -REC.0035 159

FOG WITH SMOKE AND/OR HAZE 0

BDL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

CULD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	4	12	9	0	0	3	0	0	28
1957	0	0	0	0	0	0	0	2	0	0	0	0	2
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	10	5	0	0	3	0	0	0	18
1960	0	0	0	0	0	0	0	0	0	0	0	0	0
1961	0	0	0	0	1	4	0	1	1	0	0	0	12
1962	0	0	0	0	0	21	0	7	0	0	0	0	20
1963	0	0	0	0	0	17	11	1	0	0	0	0	29
1964	0	0	0	0	0	10	0	0	0	0	0	0	10
1965	0	0	0	0	0	0	0	0	0	0	0	0	0

TOTAL HRS	0	0	0	0	15	74	20	11	4	3	0	0	127
AVG HRS	0.0	0.0	0.0	0.0	1.50	7.40	2.00	1.10	0.40	0.33	0.0	0.0	12.70

BDL

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	6	11	8	17	11	23	10	2	0	14	0	7	109
1957	1	1	1	7	1	0	20	11	0	8	0	5	55
1958	8	6	1	17	7	1	1	0	0	1	5	0	47
1959	16	8	10	3	4	4	8	0	1	5	3	22	86
1960	13	20	19	11	3	0	1	8	1	0	6	11	93
1961	14	7	20	15	0	3	0	21	1	1	2	7	91
1962	6	21	1	10	0	11	4	6	0	0	0	16	75
1963	2	11	13	17	0	0	1	1	4	0	6	4	59
1964	4	17	2	0	0	21	1	0	0	8	2	11	66
1965	5	13	7	11	16	3	12	6	0	2	0	3	78

TOTAL HRS	77	115	82	108	42	66	58	55	7	39	24	86	759
AVG HRS	7.70	11.50	8.20	10.80	4.20	6.60	5.80	5.50	0.70	3.50	2.40	8.50	75.90

WIND SPEED VS. FREQUENCY

FREQUENCY	00	15	50	89	70	52	40	22	19	12	3	3	2	2
CALM	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
	WIND SPEED (KNOTS)													

STATISTICAL RESULTS

MEAN 4.20 KNOTS
 MODE 3.00 KNOTS
 MEDIAN 4.00 KNOTS
 STD. DEV. 2.72 KNOTS
 SKEW 0.44

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	TOTAL
CALM	<1	<2	<3	<4	<5	<6	<7	<8	<9	<10	<11	<12	<13	<14	<15	
	WIND SPEED (KNOTS)															

WIND DIRECTION VS. FREQUENCY

FREQUENCY	00	15	50	89	70	52	40	22	19	12	3	3	2	2
CALM	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW
	TRUE WIND DIRECTION													

WIND DIRECTION VS. WIND SPEED

FREQUENCY	00	15	50	89	70	52	40	22	19	12	3	3	2	2
CALM	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW
	TRUE WIND DIRECTION													

VISIBILITY VS. FREQUENCY
NOTE: 7/16 MILE IS NOT A REPORTABLE VALUE

FREQUENCY	35	75	120	22	142	18	55	0	84
POSITION	0	1	2	3	4	5	6	7	8

STATISTICAL RESULTS

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MEAN 3.70/-2
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.43/16
SKEW -0.12
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TEMPERATURE VS. FREQUENCY

FREQ.	6	6	5	7	4	3	14	15	23	19	37	29	44	27	16	10	15	16	17	21	13	26	32	32	37	38	22	11	2	5	0	
<15	15	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72	
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	13	
16	16	16	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72			

STATISTICAL RESULTS

MEAN	45.84	° F.
MODE	37.50	° F.
MEDIAN	45.50	° F.
STU. DEV.	14.25	° F.
SKEW	0.59	

	SPECIAL OBS.	TOTAL OBSERVATIONS	FCG WITH SMOKE AND/OR HAZE	%
ONLY OBSERVATIONS	310	242	1084	15

ROC

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	26	7	4	1	2	0	1	1	1	9	8	11	18	4	2	3	-4
CALM	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	26																
CALM	1	2	3	4	5	6	7	8	9	10	11	12	>12				

ROC

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 32 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	
N	0.0	1.0	1.0	2.0	2.9	0.0	0.0	6.9
NNE	0.0	0.0	0.0	0.0	3.9	0.0	0.0	3.9
NE	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0
ENE	0.0	0.0	1.0	1.0	0.0	0.0	0.0	2.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
SE	0.0	1.0	0.0	0.0	0.0	0.0	0.0	1.0
SSE	0.0	0.0	1.0	0.0	0.0	0.0	0.0	1.0
S	0.0	4.9	3.9	0.0	0.0	0.0	0.0	8.8
SSW	0.0	1.0	2.9	2.9	1.0	0.0	0.0	7.8
SW	0.0	4.9	3.9	2.0	0.0	0.0	0.0	10.8
WSW	1.0	5.9	5.9	4.9	0.0	0.0	0.0	17.6
W	1.0	2.0	1.0	0.0	0.0	0.0	0.0	3.9
WNW	0.0	0.0	0.0	0.0	2.0	0.0	0.0	2.0
NW	0.0	1.0	2.0	0.0	0.0	0.0	0.0	2.9
NNW	0.0	0.0	3.9	0.0	0.0	0.0	0.0	3.9
CALM								25.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	51	40	11
TEMPERATURE (F)	28	31	32

CHECK COUNT 102
 FOG WITH LP 25
 FOG WITH FP 27
 ALL FOG CASES 151
 PURE FOG 102
 REC.OBS. 59

FUG WITH SMOKE AND/OR HAZE 0

K JC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG
MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	1	0	0	0	1
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	1	0	0	2	2	0	0	5
1959	0	0	0	0	0	0	0	0	7	0	0	0	7
1960	0	0	0	0	0	0	13	0	0	0	0	0	13
1961	0	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	0	0	1	0	0	2	2	0	0	5
1963	0	0	0	0	0	6	0	0	0	0	0	0	6
1964	0	0	0	0	1	2	0	0	2	0	0	0	5
1965	0	0	0	0	0	0	0	0	2	0	0	0	11

TOTAL HRS	0	0	0	0	1	10	13	0	16	13	0	0	53
AVG HRS	0.0	0.0	0.0	0.0	0.10	1.00	1.30	0.0	1.60	1.30	0.0	0.0	5.30

ROC

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG /

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	1	0	7	9	3	0	0	1	1	0	2	24
1957	5	0	0	3	10	0	0	0	0	5	0	0	23
1958	2	0	6	0	0	3	0	0	0	8	1	0	20
1959	5	3	0	0	0	2	0	0	2	0	0	0	12
1960	0	3	0	6	0	0	1	0	0	1	16	0	27
1961	1	13	4	0	0	5	0	2	0	1	0	14	40
1962	0	7	6	1	0	3	2	0	1	3	0	0	32
1963	0	2	4	0	0	0	0	0	2	1	2	0	11
1964	2	11	0	6	4	0	1	0	0	0	4	9	37
1965	1	6	2	1	0	0	0	0	1	16	0	4	31
TOTAL HRS	16	46	22	24	23	16	4	2	7	16	23	38	257
AVG HRS	1.60	4.60	2.20	2.40	2.30	1.60	0.40	0.20	0.70	3.60	2.30	3.80	25.70

WIND SPEED VS. FREQUENCY

STATISTICAL RESULTS

WIND SPEED VS. CUMULATIVE WIND FREQUENCY

WIND DIRECTION VS. FREQUENCY

WIND DIRECTION VS. WIND SPEED

SYR

432

SYR VISIBILITY VS. FREQUENCY
NOTE: 7/16 FILE IS NOT A REPORTABLE VALUE

FREQUENCY	34	47	55	20	73	8	31	0	45
POSITION	0	1	2	3	4	5	6	7	8
	0	1	1	3	1	5	3	7	1
	-	-	-	-	-	-	-	-	-
	16	8	15	4	16	8	16	2	

VISIBILITY(MILES)

STATISTICAL RESULTS

MEAN 3.51/16
MODE 4.00/16
MEDIAN 4.00/16
STD. DEV. 2.50/16
SKEW -0.20

TEMPERATURE VS. FREQUENCY

FREQ.	17	0	2	2	0	0	1	5	17	4	26	18	8	14	13	23	12	28	20	18	2	14	8	16	25	10	9	1	5	0	0
	15	17	19	10	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59	61	63	65	67	69	71	>72
	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	10	10	20	20	22	24	26	26	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	

TEMPERATURE (F)

STATISTICAL RESULTS

MEAN 44.85 OF.
MODE 47.50 OF.
MEDIAN 45.50 OF.
STD. DEV. 13.47 OF.
SKEW -0.20

SYR 102 102 SPECIAL OBS. 150 TOTAL OBSERVATIONS 694 FOG WITH SMOKE AND/OR HAZE 14

WIND DIRECTION VS. FREQUENCY

FREQUENCY	9	0	0	0	2	10	3	4	0	1	0	1	0	4	5	6	-3
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	TRUE WIND DIRECTION																

[illegible][illegible]

SYR

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NNE	0.0	0.0	2.1	2.1	0.0	0.0	0.0	4.2
E	0.0	4.2	10.4	6.2	0.0	0.0	0.0	20.8
ESE	0.0	6.3	0.0	0.0	0.0	0.0	0.0	6.3
SE	2.1	0.0	2.1	4.2	0.0	0.0	0.0	8.3
SSE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
S	0.0	2.1	0.0	0.0	0.0	0.0	0.0	2.1
SSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SW	0.0	2.1	6.0	0.0	0.0	0.0	0.0	8.1
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	6.2	2.1	0.0	0.0	0.0	0.0	8.3
WNW	0.0	2.1	2.1	6.2	0.0	0.0	0.0	10.4
NW	0.0	2.1	4.2	4.2	0.0	0.0	2.1	12.5
NNW	4.2	2.1	0.0	0.0	0.0	0.0	0.0	6.3
CALM								16.8
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	22	26	0
TEMPERATURE (F)	28	31	32

CHECK COUNT 48
 FOG WITH LP 3
 FOG WITH FP 37
 ALL FOG CASES 87
 PURE FOG 48
 REC.OBS. 22

FOG WITH SMOKE AND/OR HAZE 0

SYR

SYR

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	0	0	0	0	0	0	0	0	0
1958	0	0	0	0	0	0	0	0	0	0	0	0	0
1959	0	0	0	0	0	0	0	0	10	0	0	0	10
1960	0	0	0	0	0	0	8	0	2	0	0	0	10
1961	0	0	0	0	0	0	0	1	0	0	0	0	1
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	0	0	0	0	0	0
1965	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL HRS	0	0	0	0	0	0	9	1	.2	0	0	0	22
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	0.90	0.10	1.20	0.0	0.0	0.0	2.20

SYR

SYR

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES OR LATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WAPM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	2	0	0	9	11	4	0	0	1	0	0	1	28
1957	0	1	0	0	2	0	0	0	0	4	2	0	9
1958	0	0	0	0	3	0	0	0	0	1	3	0	7
1959	0	0	0	3	0	0	1	0	0	0	1	0	5
1960	0	0	0	0	0	0	0	1	2	2	7	0	12
1961	4	0	5	0	0	10	0	4	0	1	0	5	29
1962	0	0	2	0	0	0	0	0	0	0	0	0	2
1963	0	0	3	0	0	0	0	1	0	0	0	1	5
1964	2	2	8	0	1	1	0	0	0	0	0	7	21
1965	0	2	5	0	6	0	0	3	2	4	0	0	22

TOTAL HRS	8	5	23	12	23	15	1	9	5	12	13	14	140
AVG. HRS	0.80	0.50	2.30	1.20	2.30	1.50	0.10	0.90	0.50	1.20	1.30	1.40	14.00

GLE

WIND SPEED VS. FREQUENCY

FREQUENCY	49	1	13	100	151	131	127	103	63	37	45	26	12	18
CALC	1	2	3	4	5	6	7	8	9	10	11	12	13	>13
	WIND SPEED (KNOTS)													

STATISTICAL RESULTS

MEAN 5.89 KNOTS
 MODE 4.00 KNOTS
 MEDIAN 6.00 KNOTS
 STD. DEV. 3.00 KNOTS
 SKEW 0.63



WIND SPEED VS. CUMULATIVE WIND FREQUENCY

CUMULATIVE FREQUENCY	49	50	103	445	675	775	836	874	892
CALC	<2	<4	<6	<8	<10	<12	<14	TOTAL	
	WIND SPEED (KNOTS)								

WIND DIRECTION VS. FREQUENCY

FREQUENCY	49	90	45	28	10	15	18	16	44	165	83	87	41	27	64	58	52
CALC	"	NNE	NNE	NNE	E	ESE	SE	SSE	S	SSW	SW	SW	WSW	W	WNW	NNW	NNW
	TRUE WIND DIRECTION																

WIND DIRECTION VS. WIND SPEED

	>12	10-12	7-9	4-6	1-3	CALC	N	NNE	NNE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW
WIND SPEED	0	22	9	14	12	0	3	6	0	0	0	0	0	0	0	0	0	0	0	0
WIND SPEED	0	32	16	14	7	0	4	5	2	1	1	0	0	0	0	0	0	0	0	0
WIND SPEED	0	28	12	7	5	0	8	11	8	30	85	58	43	22	15	32	22	22	22	22
WIND SPEED	0	5	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALC	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TRUE WIND DIRECTION																			

240

CLE

ALC
 PROBABILITY TO FREQUENCY
 0.76; 7/16 MILE IS AT A REPORTABLE VALUE

FREQUENCY	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100						
POSITION	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

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STATISTICAL RESULTS

3.00/10
 4.00/10
 5.00/10
 6.00/10
 7.00/10
 8.00/10
 9.00/10
 10.00/10

TEMPERATURE VS. FREQUENCY

[illegible]

STATISTICAL RESULTS

MEAN	44.4%	°F.
MODE	41.50	°F.
MEDIAN	43.50	°F.
STD. DEV.	12.64	°F.
SKZ.	0.23	

TOTAL: LUGS-8 VARIATIONS	2884	FOG WITH SMOKE AND/OR HAZE	146
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CLE

WIND DIRECTION VS. FREQUENCY--

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	5	10	8	1	0	0	1	0	6	38	16	8	6	4	13	14	7
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

CLE

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.0	0.0	3.6	2.2	1.5	0.0	7.3
NNE	0.0	0.0	0.7	1.5	0.0	0.7	2.9	5.8
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7
ENE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ESE	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
SE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SSE	0.0	0.0	2.2	2.2	0.0	0.0	0.0	4.4
S	0.0	9.5	13.1	0.7	0.0	0.0	4.4	27.7
SSW	0.0	2.9	3.6	5.1	0.0	0.0	0.0	11.7
SW	0.0	0.7	2.9	0.7	1.5	0.0	0.0	5.8
WSW	0.0	0.7	3.6	0.0	0.0	0.0	0.0	4.4
W	0.0	0.0	2.2	0.7	0.0	0.0	0.0	2.9
WNW	0.0	0.0	2.9	4.4	1.5	0.7	0.0	9.5
NW	0.0	0.0	1.5	4.4	2.2	0.0	2.2	10.2
NNW	0.0	0.0	0.0	1.5	2.9	0.7	0.0	5.1
CALM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 55 46 36

28 28 TO 31 32
TEMPERATURE (F)



CHECK COUNT 137
FOG WITH LP 61
FOG WITH FP 85
ALL FOG CASES 277
PURE FOG 118
REC-085. 56

FOG WITH SMOKE AND/OR HAZE 9

CLE

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

CULD FOG													
MONTHLY FOG FREQUENCY													
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	0	0	0	6	0	0	0	0	0	6
1957	0	0	0	0	0	0	0	5	0	0	0	0	5
1958	0	0	0	0	0	0	0	0	2	0	0	0	2
1959	0	0	0	0	0	0	0	0	0	0	0	0	0
1960	0	0	0	0	0	0	8	7	10	0	0	0	25
1961	0	0	0	0	0	0	1	1	2	0	0	0	4
1962	0	0	0	0	0	0	0	0	0	0	0	0	0
1963	0	0	0	0	0	0	0	0	0	0	0	0	0
1964	0	0	0	0	0	0	0	1	0	0	0	0	1
1965	0	0	0	0	0	0	3	0	0	0	0	0	3

TOTAL HRS	0	0	0	0	0	0	18	14	14	0	0	0	46
AVG HRS	0.0	0.0	0.0	0.0	0.0	0.0	1.80	1.40	1.40	0.0	0.0	0.0	4.60

CLE

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	0	0	0	5	24	11	0	2	4	1	0	9	56
1957	6	9	0	2	1	0	0	0	1	0	4	0	23
1958	8	4	8	1	1	0	0	2	3	6	0	0	33
1959	0	0	0	0	0	0	0	1	0	0	5	0	6
1960	7	2	0	14	0	0	20	0	4	1	1	0	49
1961	0	5	0	3	0	0	0	4	3	1	0	5	22
1962	9	5	0	6	0	0	1	1	11	0	0	10	43
1963	0	0	0	0	1	0	1	0	14	0	4	0	20
1964	0	1	1	2	2	6	0	0	2	4	5	0	23
1965	0	0	6	7	2	0	1	0	9	6	0	0	31

TOTAL HRS	30	26	15	40	31	17	23	10	51	19	19	25	306
AVG HRS	3.00	2.60	1.50	4.00	3.10	1.70	2.30	1.00	5.10	1.90	1.90	2.50	30.60

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FREQUENCY	453	19	132	169	174	119	74	38	25	16	10	4	1	0
WIND SPEED (KNOTS)														
CALM	1	2	2	3	4	5	6	7	8	9	10	11	12	13

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YEAR:	2.68 KNOTS
WIND:	0.0 KNOTS
WINDY:	3.00 KNOTS
STD. DEV.	2.59 KNOTS
SKED	1.00

**CUMULATIVE
FREQUENCY**

453	471	372	1055	1172	1213	1227	1229	1229

CALM	22	24	26	28	210	212	214	TOTAL
WIND SPEED (KNOTS)								

FREQUENCY		451	97	34	26	16	55	42	60	95	128	50	14	3	6	18	36	80
CUM		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	NNNE	
TRUE WIND DIRECTION																		

[illegible]

NOTE: 7/10 MILE IS NOT A REPORTABLE VALUE

MEAN	3.06/16	
SD	4.00/16	
COV	2.00/16	
STD. DEV.	2.65/16	
N	9	

MEAN	45.13	OF.
MODE	33.50	OF.
MEDIAN	47.50	OF.
STD. DEV.	14.81	OF.
SKEW.	0.58	

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CMH

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

FREQUENCY	70	5	1	0	2	3	6	13	17	24	3	0	0	1	3	4	17
CALM	N	NNE	NE	ENE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
TRUE WIND DIRECTION																	

-RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

	0	1	2	3	4	5	6	7	8	9	10	11	12	>12
N	0	0	0	0	1	3	1	0	0	0	0	0	0	0
NNE	0	0	0	0	0	1	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ENE	0	0	0	1	0	0	0	0	0	0	0	0	0	0
E	0	0	0	1	1	1	0	0	0	0	0	0	0	0
ESE	0	0	0	1	2	3	0	0	0	0	0	0	0	0
SE	0	0	0	1	4	1	0	0	0	0	0	0	0	0
SSE	0	0	0	5	2	5	0	0	0	0	0	0	0	0
S	0	0	0	3	7	5	3	1	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	1	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	2	1	0	0	0	0	0	0	0	0	0
NNW	0	0	0	3	0	0	1	0	0	0	0	0	0	0
CALM	70	0	2	7	3	1	2	2	0	0	0	0	0	0

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C:III

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	0.6	2.4	0.0	0.0	0.0	0.0	3.0
NNE	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.6
NE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ENE	0.0	1.2	0.0	0.0	0.0	0.0	0.0	1.2
E	0.0	1.2	0.6	0.0	0.0	0.0	0.0	1.8
ESE	0.0	1.8	1.8	0.0	0.0	0.0	0.0	3.6
SE	0.0	4.7	3.0	0.0	0.0	0.0	0.0	7.7
SSE	0.0	4.1	5.9	0.0	0.0	0.0	0.0	10.1
S	0.0	5.9	5.9	2.4	0.0	0.0	0.0	14.2
SSW	0.0	1.8	0.0	0.0	0.0	0.0	0.0	1.8
SW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WSW	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
W	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6
WNW	0.0	1.2	0.6	0.0	0.0	0.0	0.0	1.8
NW	0.0	1.8	0.0	0.6	0.0	0.0	0.0	2.4
NNW	0.0	5.3	2.4	2.4	0.0	0.0	0.0	10.1
CALM								41.4
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY	102	44	23
TEMPERATURE (F)			
	<28 28 TO 31 32		

CHECK COUNT 169
 FOG WITH LP 16
 FOG WITH FP 65
 ALL FOG CASES 248
 PURE FOG 85
 REC-005. 88

FOG WITH SMOKE AND/OR HAZE 42

CMH

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION. OBSERVATIONS ANALYZED ARE HOOKY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F AND SURFACE VISIBILITY 1/2 MILE OR LESS.

CULD FOG												
MONTHLY FOG FREQUENCY												
	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE TOTAL
1956	0	0	0	0	0	0	0	0	0	0	0	0
1957	0	0	0	0	2	0	4	0	0	0	0	6
1958	0	0	0	0	0	2	0	0	0	0	0	2
1959	0	0	0	0	0	6	3	4	4	0	0	17
1960	0	0	0	0	11	0	1	9	3	0	0	24
1961	0	0	0	0	0	0	0	0	0	0	0	0
1962	0	0	0	3	5	4	0	0	0	0	0	12
1963	0	0	0	0	3	4	3	0	0	0	0	10
1964	0	0	0	0	0	0	4	0	0	0	0	4
1965	0	0	0	0	0	0	4	0	0	0	0	4
TOTAL HRS	0	0	0	3	21	16	19	13	7	0	0	79
AVG HRS	0.0	0.0	0.0	0.30	2.10	1.60	1.90	1.30	0.70	0.0	0.0	7.90

CNH

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOURLY TYPE, WITH TEMPERATURES GREATER THAN 31 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1956	12	1	9	1	18	7	3	3	6	0	0	7	67
1957	3	0	7	7	12	0	4	3	2	3	1	1	43
1958	16	13	4	8	0	6	0	0	0	4	1	3	55
1959	2	8	0	0	0	1	4	1	0	3	4	0	23
1960	7	7	11	7	7	0	15	0	0	7	0	4	65
1961	6	5	1	13	0	0	0	1	1	0	7	6	40
1962	0	5	10	4	1	0	0	0	0	0	0	0	20
1963	3	4	2	4	23	0	10	0	17	0	5	2	70
1964	0	4	12	3	15	0	1	0	0	6	0	5	46
1965	0	3	18	0	4	0	2	3	1	1	1	0	33

TOTAL HRS	49	53	74	47	80	14	39	11	27	24	19	28	462
AVG HRS	4.40	5.00	7.40	4.70	8.00	1.40	3.90	1.10	2.70	2.40	1.90	2.80	46.20

GEG

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

FREQUENCY	219	47	124	432	238	84	56	57	46	60	65	85	53	24	12	25	22
CALM		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW

WIND DIRECTION VS WIND SPEED

WIND DIRECTION VS WIND SPEED

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	NNW	NW	NNN
CALM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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GHEA COUNT 6418
FOG WITH LP 177
FOG WITH FP 137
ALL FOG CASES 1972
PURE FOG 1980
FIRST CARU 1-4-55
LAST CARU 12-31-64
DISCARDS 0
TOTAL CARUS: 8418

252

GEG

DISCARD NO. ***
CARUS ANALYZED: 1669

GEG

WIND USE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FLO WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

WIND DIRECTION	PERCENTAGE OF WINDS										TOTAL
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT				
N	0.0	1.3	1.2	0.2	0.1	0.0	0.0	0.0	0.0	0.0	2.8
NNE	0.0	3.2	2.8	1.3	0.2	0.0	0.0	0.0	0.0	0.0	7.5
NE	0.0	8.0	11.2	5.5	0.9	0.2	0.1	0.1	0.1	0.1	23.0
ENE	0.0	4.4	6.0	4.8	1.6	0.1	0.0	0.0	0.0	0.0	14.3
E	0.0	2.1	2.2	0.7	0.1	0.1	0.0	0.0	0.0	0.0	5.0
ESE	0.0	1.7	1.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	3.4
SE	0.1	1.7	0.8	0.7	0.2	0.0	0.0	0.0	0.0	0.0	3.4
SSE	0.0	0.7	0.8	1.0	0.2	0.1	0.0	0.0	0.0	0.0	2.8
S	0.0	0.6	1.4	0.8	0.4	0.1	0.1	0.1	0.1	0.1	3.6
SSW	0.0	0.6	1.6	0.6	0.6	0.1	0.1	0.1	0.1	0.1	3.9
SW	0.1	1.5	2.4	0.7	0.3	0.0	0.1	0.1	0.1	0.1	5.1
WSW	0.0	1.0	1.5	0.5	0.1	0.0	0.0	0.0	0.0	0.0	3.2
W	0.0	1.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.4
WNW	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
W.0	0.0	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
W.0	0.0	0.8	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.3
CALM				0.2	0.0	0.0	0.0	0.0	0.0	0.0	14.3
TOTAL											100.0

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TEMPERATURE VS. FREQUENCY

FREQUENCY 831 842 1049

20 25 31 35 3
TEMPERATURE (F)

GEG

RESULTS FROM CARD DECK 144
MONTHLY FOG DISTRIBUTION FOR SPOKANE, WASHINGTONOBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.
OBSERVATIONS ANALYZED ARE HOOKLY TYPE, WITH TEMPERATURES LESS THAN 32 DEGREES F
AND SURFACE VISIBILITY 1/2 MILE OR LESS.

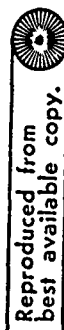
COLD FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1955	0	0	0	0	3	44	97	21	2	2	0	0	169
1956	0	0	0	0	41	120	20	59	0	0	0	0	260
1957	0	0	0	0	16	9	30	56	9	0	0	0	100
1958	0	0	0	0	0	49	76	5	0	3	0	0	133
1959	0	0	0	3	10	93	14	17	0	0	0	0	137
1960	0	0	0	4	11	95	50	19	0	1	0	0	180
1961	0	0	0	26	30	48	45	4	2	0	0	0	155
1962	0	0	0	1	24	37	33	6	5	0	0	0	106
1963	0	0	0	0	0	40	60	42	6	1	0	0	145
1964	0	0	0	0	76	39	3	34	0	0	0	0	154

TOTAL HRS 0 0 0 34 213 574 428 428 243 24 7 0 0 1523
 AVG HRS 0.0 0.0 0.0 3.40 21.30 57.40 42.80 42.80 24.30 2.40 0.70 0.0 0.0 152.30

OBSERVATIONS ARE FOR FOG, POSSIBLY WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION.



GEG

WARM FOG

MONTHLY FOG FREQUENCY

	JULY	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1955	3	0	0	42	19	0	17	0	0	1	0	0	88
1956	0	3	0	3	25	14	6	3	0	0	2	0	56
1957	0	0	3	33	4	4	1	3	16	0	3	0	67
1958	2	0	0	41	6	62	32	26	5	9	3	4	190
1959	0	0	8	17	3	2	6	2	0	2	2	0	42
1960	0	0	0	4	5	0	3	4	3	0	0	0	24
1961	0	0	0	26	22	17	3	11	0	0	6	0	65
1962	0	0	0	67	23	74	12	41	4	2	4	2	249
1963	0	0	7	7	2	3	0	55	3	8	0	0	85
1964	0	0	0	6	19	5	0	0	6	0	0	0	36

TOTAL HRS 2 3 18 260 128 137 80 150 57 22 20 6 922
 AVG HRS 0.50 0.30 1.80 26.0 12.80 18.70 8.00 15.00 3.70 2.20 4.00 0.00 92.20

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BOI

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BOI

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOG AND/OR HAZE BUT NO PRECIPITATION

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	2.0	0.0	0.1	0.3	0.0	0.0	2.9
NNE	0.0	0.0	0.0	0.1	0.0	0.0	0.0	1.0
NE	0.0	1.0	0.5	0.1	0.0	0.0	0.0	2.5
NNE	0.0	0.4	0.5	0.1	0.0	0.0	0.0	1.0
E	0.0	1.1	0.8	0.0	0.0	0.0	0.0	1.9
ESE	0.1	1.0	1.1	0.0	0.1	0.0	0.1	4.2
SE	0.0	2.4	2.2	0.9	0.0	0.0	0.0	5.4
SSE	0.0	1.0	1.8	0.3	0.1	0.0	0.0	3.2
S	0.0	2.0	1.9	0.4	0.0	0.0	0.0	4.8
SSE	0.0	0.9	0.1	0.0	0.0	0.0	0.0	1.0
SSW	0.0	1.9	0.9	0.1	0.3	0.0	0.0	3.2
SW	0.0	2.0	1.5	0.3	0.0	0.1	0.0	3.7
WSW	0.0	2.0	2.9	0.8	0.1	0.0	0.0	6.7
W	0.0	2.2	5.3	2.5	0.5	0.1	0.1	10.9
WNW	0.0	4.0	4.2	1.0	0.4	0.1	0.1	11.0
NW	0.0	1.0	1.9	0.1	0.0	0.0	0.0	3.0
W	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
CALM								34.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 207 216 709

<20 20 TO 21 <33
TEMPERATURE (F)

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CHECK COUNT 2947
FOG WITH LP 10
FOG WITH FP 30
ALL FOG CASES 441
PURE FOG 767
FIRST CASE 1-1-50
LAST CASE 0-0-0

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

FREQUENCY	164	10	14	23	14	17	17	26	21	28	20	14	9	8	13	9
CALM	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
	TRUE WIND DIRECTION															

WIND DIRECTION VS WIND SPEED

WIND DIRECTION VS WIND SPEED

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

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RNO

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.5	1.6	0.2	0.0	0.0	0.0	0.0	2.3
NNE	0.0	2.8	0.5	0.0	0.0	0.0	0.0	3.2
NE	0.5	4.4	0.5	0.0	0.0	0.0	0.0	5.3
ENE	0.9	1.0	0.7	0.0	0.0	0.0	0.0	3.2
E	0.2	3.2	0.5	0.0	0.0	0.0	0.0	3.9
ESE	0.7	2.5	0.7	0.0	0.0	0.0	0.0	3.9
SE	1.2	3.0	1.8	0.0	0.0	0.0	0.0	6.0
SSE	0.7	2.8	1.4	0.0	0.0	0.0	0.0	4.8
S	1.2	3.2	2.1	0.0	0.0	0.0	0.0	6.5
SSW	0.2	3.2	1.2	0.0	0.0	0.0	0.0	4.6
SW	1.5	3.0	1.4	0.0	0.0	0.0	0.0	6.0
WSW	0.0	2.5	0.9	0.0	0.0	0.0	0.0	3.2
W	0.2	0.9	0.7	0.0	0.0	0.0	0.0	2.1
WNW	0.2	2.1	0.7	0.0	0.0	0.0	0.0	1.8
NW	0.0	1.0	0.5	0.2	0.0	0.0	0.0	3.0
CALM	0.0	0.0	0.2	0.0	0.0	0.0	0.0	2.1
TOTAL								37.9
								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 342 75 433

 <28 28 TO 31 <33
 TEMPERATURE (F)

CHECK COUNT 968
 FOG WITH LP 17
 FOG WITH FP 21
 ALL FOG CASES 470
 PURE FOG 419
 FIRST CARD 1- 4-55
 LAST CARD 11-17-64

MFR

WIND DIRECTION VS. FREQUENCY

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

FREQUENCY	1536	90	53	32	16	11	23	46	43	39	21	31	23	22	27	58	31
CALN	N	NNE	NE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW		

WIND DIRECTION VS WIND SPEED

WIND DIRECTION VS WIND SPEED

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

	0	1	2	3	4	5	6	7	8	9	10	11	12	>12
CALN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
N	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
E	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ESE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WSW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NNW	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CALN	1536													

NFR

WIND ROSE DATA

RESULTS ARE FROM OBSERVATIONS OF VISIBILITY LESS THAN 1/2 MILE, TEMPERATURE LESS THAN 33 DEGREES (F) AND FOG WITH SMOKE AND/OR HAZE BUT NO PRECIPITATION

WIND DIRECTION	PERCENTAGE OF WINDS							
	1-2KT	3-4KT	5-6KT	7-8KT	9-10KT	11-12KT	>12KT	TOTAL
N	0.0	1.1	2.7	0.4	0.0	0.0	0.0	4.3
NNE	0.0	0.9	1.3	0.3	0.0	0.0	0.0	2.5
NE	0.0	0.5	1.0	0.1	0.0	0.0	0.0	1.6
ENE	0.0	0.3	0.5	0.0	0.0	0.0	0.0	0.8
E	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.5
ESE	0.0	0.4	0.6	0.0	0.0	0.0	0.0	1.1
SE	0.0	0.6	1.5	0.1	0.0	0.0	0.0	2.2
SSE	0.0	0.3	1.4	0.2	0.0	0.0	0.0	2.0
S	0.0	0.4	1.2	0.2	0.0	0.0	0.0	1.9
SSE	0.0	0.4	0.5	0.0	0.0	0.0	0.0	1.0
SSW	0.0	0.3	0.9	0.0	0.0	0.0	0.0	1.5
SW	0.0	0.4	0.5	0.1	0.0	0.0	0.0	1.1
WSW	0.0	0.4	0.6	0.0	0.0	0.0	0.0	1.0
W	0.0	0.3	0.8	0.0	0.0	0.0	0.0	1.3
WNW	0.0	1.0	1.6	0.0	0.1	0.0	0.0	2.8
W	0.0	0.5	0.8	0.1	0.0	0.0	0.0	1.5
W	0.0	0.5	0.8	0.1	0.0	0.0	0.0	1.5
TOTAL								100.0

TEMPERATURE VS. FREQUENCY

FREQUENCY 000 1176 2104

28 28 31 33
TEMPERATURE (F)

CHECK COUNT 9637
FOG WITH LP 162
FOG WITH FP 01
ALL FOG CASES 2323
PURE FOG 212
FIRST CARD 1- 1-55
LAST CARD 1-31-04

CUMULATIVE TOTALS FOR ALL AIRPORTS

Fog with visibility $\frac{1}{2}$ mile and less
 No precipitation included
 Source: WCC, NOAA, Car. Deck 138
 10 years of data
 39 Airports (Anchorage, Detroit, Spokane, Boise,
 Reno and Medford not included)

WIND SPEED vs. FREQUENCY

Frequency	10606	756	3019	7053	8713	7792	5410	3880	2969	1529	1534	560	531	264	700
Calm	1	2	3	4	5	6	7	8	9	10	11	12	13	Over	13

Wind Speed (knots)

Statistical Results:

Mean: 4.34 knots
 Mode: 0
 Std. Dev.: 3.15 knots
 Skew: 1.38 knots
 Median: 4.00 knots

VISIBILITY vs. FREQUENCY

Frequency	5326	6203	12008	2632	15316	653	4120	0	2058
	0	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2

Visibility (miles)

Statistical Results:

Mean: 3.61/16
 Mode: 4.00/16
 Std. Dev.: 2.50/16
 Skew: -0.16
 Median: 4.00/16

CUMULATIVE TOTALS FOR ALL AIRPORTS

TEMPERATURE vs. FREQUENCY

Frequency	517	139	238	217	238	406	605	883	1366	1943	2252	2570	2417	2354	2353	2604
	under	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43
	15	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to
		16	18	20	22	24	26	28	30	32	34	36	38	40	42	44

Temperature (F)

TEMPERATURE vs. FREQUENCY

Frequency	2959	2991	30	3252	3194	2832	2401	2547	2561	2228	2122	1676	1351	725	305
	45	47	46	51	53	55	57	59	61	63	65	67	69	71	Over
	to	to	to	to	to	to	to	to	to	to	to	to	to	to	72
	46	48	50	52	54	56	58	60	62	64	66	68	70	72	

Statistical Results:

Mean: 48.22 Degrees (F)
 Mode: 51.5 Degrees (F)
 Std. Dev.: 12.82 Degrees (F)
 Skew: -0.26
 Median: 49.5 Degrees (F)